Original Research *SpatulaDD.2016;6(1):39-47*

Complementary and alternative medical methods: attitude, knowledge and use by health personnel

Tamamlayıcı ve alternatif tıbbi yöntemler: sağlık personelin tutumu, bilgisi ve kullanımı

TulaySagkal Midilli[1,*], Ebru Baysal[2], Gulzade Akarsu[3], Emine Korkmaz[4]

[1]Department of FundamentalNursing, Celal Bayar UniversityHealth School, Manisa, Turkey
[2]Department of Fundamentals NursingNursingFaculty of Ege UniversityIzmir, Turkey
[3]Celal Bayar UniversityHospital Manisa, Turkey
[4]Turgutlu StateHospital Manisa, Turkey

ABSTRACT
Aim: The aim of this study was to determine the attitude of health personnel to CAM methods, and their knowledge and use of them.
Methods: The study was descriptive in nature. It was conducted between March and June 2014 with 202 health workers employed at two government hospitals in the province of Manisa, Turkey.
Results: It was found that 74.8% of the health workers used CAM methods, 81.7% had a medium to good knowledge of them, and more than half had positive attitudes towards them. The three CAM methods which the participants knew about and used the most were, in order, the use of plants, showers, and hot and cold treatment. Health personnel differed in their attitudes to CAM methods according to their profession, educational level and gender ($p < .05$).
Conclusion: Health personnel had a high level of knowledge, they had positive attitudes towards CAM methods and most of them used at least one CAM method. Doctors, those with a higher educational level and female health workers had greater knowledge of CAM, while nurses and female health workers had a higher opinion of CAM.
Keywords: Health personnel; Complementary and alternative medicine; Knowledge; Attitude.

ÖZET
Amaç: Bu çalışmanın amacı sağlık personelinin CAM yöntemlerine karşı tutumunu, bilgisini ve kullanma durumlarını belirlemektir.
Yöntemler: Araştırma tanımlayıcı nitelikte yapılmıştır. Araştırmaya Mart-Haziran 2014 tarihlerinde, Türkiye'de Manisa ilinin iki ilçesinde yer alan iki devlet hastanesinde çalışan 202 sağlık personeli alınmıştır.
Bulgular: Sağlık personelin %74.8'i CAM yöntemlerini kullanıyor, %81.7'sini orta ve iyi düzeyde bilgiye sahip ve yarısından fazlasının olumlu tutumları vardır. Katılımcıların en çok bildiği ve kullandığı üç CAM yöntemleri sırasıyla; bitkisel, duş, sıcak-soğuk uygulamadır. Sağlık personelinin mesleği, eğitim düzeyi ve cinsiyetinin CAM yöntemlerine karşı tutumları arasında bir fark vardır ($p < .05$).
Sonuç: Sağlık personelin bilgi düzeyi yüksektir, CAM yöntemlerine karşı olumlu tutumlara sahiptir ve çoğunluğunun CAM yöntemlerinden en az birini kullanmıştır. Doktorların, eğitim düzeyi yüksek olanların ve kadın sağlık personelin CAM konusunda daha fazla bilgi sahibi iken, hemşirelerin ve kadın sağlık personelinin CAM yöntemlerine karşı tutumları daha yüksektir.
Anahtar kelimeler: Sağlık personeli; Tamamlayıcı ve alternatif tıp; Bilgi; Tutum.

CorrespondingAuthor:
*Tulay Sagkal Midilli,
Assistant Professor, Department of Fundamental Nursing, Celal Bayar University Health School, Manisa, Turkey
tulay.sagkal@cbu.edu.tr

Received February 21, 2016; **Accepted** March 13, 2016
DOI 10.5455/spatula.20160313010209
Published online in ScopeMed (www.scopemed.org).
Spatula DD.

INTRODUCTION

Complementary and Alternative Medicine (CAM) methods are used throughout the world and moreover are increasingly being accepted by health personnel. Researchers have found that in spite of the great advances in classical medicine people both in developed and developing nations are increasingly turning to CAM methods [1]. In particular, these methods are being increasingly integrated into the day-to-day practices of health professionals.

Because the knowledge and attitudes of health personnel can affect patients' beliefs and behaviors towards CAM, health personnel play an important role in the choice of treatment approaches [1-3]. For this

reason, because doctors and nurses can alert patients to the possible risks and side effects of CAMand at the same time answer their questions, it is recommended that they have a comprehensive knowledge of the subject [3, 4]. Also, it has been decided in some developed countries that lessons on CAM methods should be included in the syllabus of medical training. In this way, both practitioners and patients can benefit from the best treatment methods with low costs and high quality [4].

Studies conducted in various countries on the knowledge, use and attitude of health personnel concerning CAM methods have reached different conclusions. Thus, more than 90% of nurses participating in a study in Hong Kong showed interest in learning about CAM [3]. In Australia, 59% of nurses had a positive attitude to CAM, but it was found that more than 60% had very little or no knowledge of it. Also, it was found that the nurses' professional use of CAM methods was related to various socio-demographic factors and that there was a positive relationship between their knowledge of CAM and their attitudes to it [5]. In Israel, a majority (87%) of midwifery nurses use CAM methods and recommend them to patients. In addition, they think that these methods are integral to traditional medical treatment [6]. In Switzerland, it was reported that 56% of health care practitioners have a positive attitude to learning about such methods, but that there was a lack of knowledge among registered health care professionals on the topic of CAM [7]. In a study conducted in Taiwan, 64% of nurses had positive attitudes towards CAM and most of them reported occasionally using methods such as massage therapy. This study concluded that Taiwanese nurses felt the need for more formal training in CAM [8]. These findings show that health personnel have a great need for knowledge of CAM methods. Considering people's increasingly favorable attitude to medicine of this type, the small number of studies on the knowledge, use and attitudes of CAM on the part of health professionals has shown that it is necessary to pay attention to this topic.

There have been an insufficient number of studies in this country on the attitudes, knowledge and use of CAM by health personnel, and the Turkish Ministry of Health has introduced new legislation concerning the practice of traditional, complementary and alternative medicine, and so the importance of this topic has increased. For this reason, the aim of this study has been to determine the attitudes to and knowledge and use of CAM methods on the part of health personnel.

METHODS

Design and Sample

This descriptive study was conducted between March and June 2014 on health personnel (doctors, nurses, midwives, psychologists, dieticians and physiotherapists) and government hospitals A and B in the province of Manisa, Turkey. Inclusion criteria were health workers who (a) were working in inpatient or outpatient treatment clinics, (b) were caring for patients, and (c) participated voluntarily in the research. The population of the study comprised the 391 health workers who were employed at government hospitals A and B. A total of 202 health personnel were selected by a simple random sampling method and completed the questionnaires.

Data collection and instruments

A questionnaire was used which was prepared by the researchers in line with the literature [1, 3-6, 9-11]. This form consisted of 26 questions covering socio-demographic characteristics, attitude towards CAM methods, and knowledge and use of them. The forms were given to the participants during their working hours, and took approximately ten minutes to complete.

The forms were divided into three sections. The first section contained questions on the participants' socio-demographic characteristics: age, gender, place of work, profession, educational status, income, professional experience and place of residence. The second section covered the participants' attitudes to CAM methods: awareness of CM methods, belief in their effectiveness, level of knowledge, usage status, three methods most used, purpose of use, time of use, achieving the expected result, reasons for not using the methods, status of recommendation to family and friends, status of recommendation to patients, reasons for not recommending the methods, investigating patient use, knowledge of methods use by patients, the three methods most used by patients, training in CAM during professional life, and the idea of receiving instruction on CAM before or after graduation. In the third section, participants were asked about their knowledge and use of CAM methods: herbal, showering, hot and cold application, massage, religious methods, nutrition, exercise and sport, vitamin supplements, music therapy, thermal springs, relaxation techniques, yoga, color therapy, TENS, acupuncture, reflexology, hydrotherapy, aromatherapy, energy therapy, hypnotherapy, phytotherapy, ayurveda, acupressure, homeopathy, chiropractic, taichi, Alexander technique and shiatsu.

In the third part, the two questions designed by the researchers after the literature review focused on the state of knowledge and use of CAM methods by participants. Each of these questions included a list of 28 CAM methods. In these two questions, the participants provided answers about the state of their own knowledge and the use of each method in a two-choice Likert scale, with the options of "no" = 0 and "yes" = 1. Reliability was also measured by the test-retest method in ten participants. Item analysis of the questionnaire related to knowledge and use of CAM methods was conducted to evaluate the reliability of the questionnaire. Item analysis of the questionnaire yielded KR-20 (Kuder-Richardson formula 20) = 0.94.

Ethicalconsiderations

Before commencing the study, written permission was obtained from Celal Bayar University Medical Faculty Ethics Committee (Approval No. 20478486-87), Manisa Province Public Hospitals Association (Approval No. 72782165), and from the health workers participating in the research. Information on the process of the research was given to all participants before they entered the study, and an informed voluntary consent was given. Participants were told that they could withdraw from the study at any time and that all information would be kept confidential.

Data Analysis

Analysis of data was performed using the program SPSS 16.00. Numerical data, percentage distributions and means were used in the descriptive statistics. Pearson chi-square tests were used in order for the researchers to determine the relationship between demographic characteristics and attitudes to CAM. The confidence interval was 95% and $p < .05$ was taken as the level of significance.

RESULTS

The socio-demographic characteristic of the health workers was examined. The mean age of the participants was 34.18±6.82, and 45% of them were in the 26-35 age group. Also, 75.2% were female, 54.5% worked in government hospital B, 52.5% were nurses, and 51.5% had an educational level of first degree or higher. The income and expenditure of 63.4% was balanced, 44.6% had 0-10 years of experience, and 65.4% lived outside the city.

Attitudes of health personnel to CAM methods

The attitudes of the health personnel to CAM methods are examined in Table 1. This shows that 59.4% of the health personnel knew the difference between CAM methods, 80.2% believed that these methods were effective, and 81.7% had a medium or good knowledge of CAM. It can be seen that 74.8% of the participants (n=151) stated that they used CAM methods, 53% used them with the aim of supporting and 62.3% along with medical treatment; 50.2% of the users mostly used herbal treatments, and 60.3% of them stated that the method they used brought relief. The 43.1% who did not use CAM methods (n=51) did not use them because they thought medical treatment was better than CAM methods.

According to their statements, 65.3% of participants recommended CAM methods to their family and friends and 66.3% recommended them to patients. The 45.6% (n=68) who did not recommend them stated that they did not have enough information about CAM methods. It was seen that 30.7% of the health personnel stated that they did not ask patients what CAM methods they used, 67.8% knew what CAM methods the patients were using, and 45.3% of these (n=137) stated that the method most used by patients was massage. Finally, 93.6% of the participants stated that they had received no training in CAM during their education, and 57.9% suggested that training in CAM should be given before and after graduation (Table 1).

Knowledge and use of CAM methods by health personnel

Knowledge and use of CAM methods by the health personnel are examined in Table 2. The CAM methods which the participants stated that they had knowledge of were, in the first five order, herbal methods (96.5%), showers (92.1%), hot and cold applications (89.6%), massage (87.1%) and religious methods (86.1%).

Table 1.Attitudes of Health Personnel to CAM Methods

Attitudes to CAM Methods	n (%)	Attitudes to CAM Methods	n (%)
Knowing the difference between Complementary and Alternative Medicine Methods (n=202)		**Recommending to Family and Friends (n=202)**	
Yes	120 (59.4)	Yes	132 (65.3)
No	82 (40.6)	No	70 (34.7)
Belief in the Effectiveness of CAM Methods (n=202)		**Recommending CAM Methods to Patients (n=202)**	
Yes	162 (80.2)	Yes	134 (66.3)
No	40 (19.8)	No	68 (33.7)
Level of Knowledge of CAM methods (n=202)		**Reasons for not recommending CAM Methods to Patients (n=68)**	
		Having insufficient knowledge	31 (45.6)
Poor	37 (18.3)	They affect medical treatment negatively	3 (4.4)
Medium	138 (68.3)	Their effects and side effects are unknown	18 (26.5)
Good	27 (13.4)	Insufficient legal basis	16 (23.5)
Use of CAM methods (n=202)		**Inquiry into use of CAM methods by patients (n=202)**	
Yes	151 (74.8)	Never	62 (30.7)
No	51 (25.2)	Sometimes	107 (53.0)
		Always	33 (16.3)
Three most commonly used CAM methods (n=151) *		**Knowledge of CAM methods used by patients (n=202)**	
Herbal treatment	76 (50.2)		
Massage	44 (29.0)	Yes	137 (67.8)
Exercise	42 (27.8)	No	65 (32.2)
Purpose of CAM use (n=151)		**Patients' three most commonly used CAM methods (n=137)***	
Treatment	9 (6.0)		
Support	80 (53.0)	Massage	62 (45.3)
Protection	20 (13.2)	Herbal	61 (44.5)
Relief	42 (27.8)	Hot springs	46 (33.6)
Time of use of CAM methods (n=151)		**Training in CAM during professional life (n=202)**	
Before medical treatment	34 (22.5)		
Along with medical treatment	94 (62.3)	Yes	13 (6.4)
When I see no benefit in medical treatment	17 (11.3)	No	189 (93.6)
After medical treatment	6 (4.0)		
Achieving the expected result from the methods used (n=151)		**Should there be CAM training before / after graduation (n=202)**	
I achieved the expected result	34 (22.4)		
It gave me relief	91 (60.3)	Yes	117 (57.9)
I haven't yet got the result I expected	6 (4.0)	No	30 (14.9)
I didn't apply it properly so I saw no harm or benefit	19 (12.6)	Undecided	55 (27.2)
I saw no benefit	1 (0.7)		
Reasons for not using CAM methods (n=51)			
Fear of using them	3 (5.9)		
Inability to achieve the method	5 (9.8)		
Too expensive	7 (13.7)		
Lack of belief	9 (17.6)		
Thinking it was harmful	5 (9.8)		
Thinking that medical treatment is better	22 (43.1)		

*It was selected more than one choice.

The CAM methods which the participants reported that they used were, in the first five order, herbal methods (90.1%), showers (89.1%), hot and cold applications (84.7%), religious methods (76.7%) and nutrition (75.7%). However, none of the participants used the methods of taichi, Alexander technique or shiatsu (Table 2).

Table 2. Knowledge and use of CAM methods by health personnel

CAM method (n=202)	Knowledge n (%)	Use n (%)
Herbal (tea, etc.)	195 (96.5)	182 (90.1)
Shower	186 (92.1)	180 (89.1)
Hot and cold application	181 (89.6)	171 (84.7)
Massage	176 (87.1	146 (72.3)
Religious	174 (86.1)	155 (76.7)
Nutrition	171 (84.7)	153 (75.7)
Exercise and sport	167 (82.7)	149 (73.8)
Vitamins	165 (81.7)	141 (69.8)
Music therapy	163 (80.7)	141 (69.8)
Hot springs	158 (78.2)	115 (56.9)
Relaxation techniques	154 (76.2)	110 (54.5)
Yoga	139 (68.8)	27 (13.4)
Color	123 (60.9)	68 (33.7)
TENS	120 (59.4)	55 (27.2)
Acupuncture	112 (55.4)	27 (13.4)
Reflexology	102 (50.5)	31 (15.3)
Hydrotherapy	95 (47)	33 (16.3)
Aromatherapy	94 (46.5)	42 (20.8)
Energy therapy	93 (46)	35 (17.3)
Hypnotherapy	92 (45.5)	7 (3.5)
Phytotherapy	74 (36.6)	21 (10.4)
Ayurveda	62 (30.7)	4 (2.0)
Acupressure	52 (25.7)	13 (6.4)
Homeopathy	52 (25.7)	4 (2.0)
Chiropractic	49 (24.3)	2 (1.0)
Taichi	44 (21.8)	0 (0)
Alexander technique	35 (17.3)	0 (0)
Shiatsu	33 (16.3)	0 (0)

Comparison of the attitudes of health personnel to CAM methods to their profession, educational level and gender

No statistical difference was found between the participants' knowledge of the differences between CAM methods, their belief in the effectiveness of CAM methods, their level of knowledge of CAM methods, their receipt of training in CAM methods during professional life, their recommendation of CAM methods to patients, or their use on themselves of CAM methods according to their age, place of work or years of experience (p> .05).

In Table 3, the attitudes of the health personnel towards CAM methods are compared with their professions, educational levels and gender. A statistically significant difference was found according to profession between participants' knowledge of the differences between CAM methods, belief in the effectiveness of CAM methods, level of knowledge of CAM methods, receipt of education in CAM methods during professional life or recommendation of CAM methods to patients (p< .05), but there was no significant difference between use of CAM methods on themselves (p> .05).

A statistically significant difference was found according to the educational level of the health personnel between their knowledge of the difference between CAM methods, their belief in the effectiveness of CAM methods and their receipt of CAM training during their professional life (p< .05), but no significant difference was found between their use of CAM methods or their recommendation of CAM methods to patients (p> .05) (Table 3).

A significant difference was found according to the participants' gender between their knowledge of the differences between CAM methods, and their level of knowledge of CAM methods (p< .05), but no significant difference was found between their belief in the effectiveness of CAM methods, their use of CAM methods on themselves, their receipt of training in CAM methods during their professional life or their recommendation of CAM methods to patients (p> .05) (Table 3).

DISCUSSION

Evaluation of attitudes of health personnel to CAM methods

It was found that more than half (59.4%) of the health personnel in the present study knew the difference between CAM methods, most (80.2%) believed in the effectiveness of CAM methods, and most (81.7%) described their knowledge of CAM methods as medium or good. In a study of nurses in an intensive care unit, Trail-Mahan et al. (2013) reported that 51% of participants had a weak level of knowledge, while 47% correctly identified complementary treatments and 33% complementary and alternative treatments [9]. The results of various studies performed with health workers and health sciences students have shown the knowledge of participants concerning CAM methods to be at inadequate levels [5, 10, 12, 13]. In compared with the literature, it can be said that the knowledge levels of participants in the present study were high, and that they showed positive attitudes towards CAM methods.

Table 3. Comparison of the Attitudes of Health Personnel to CAM Methods to their Profession, Education and Gender

	Profession (n=202)					
	Doctor n (%)**	Nurse n (%)**	Midwife n (%)**	Other n (%)**	Total n (%)***	χ^2 , p

Knowing the difference between CAM methods						
Yes	28 (23.3)	69 (57.5)	19 (15.8)	4 (3.3)	120 (59.4)	χ^2=24.051
No	6 (7.3)	37 (45.1)	37 (45.1)	2 (2.4)	82 (40.6)	p=0.000*
Believing in the effectiveness of CAM methods						
Yes	32 (19.8)	85 (52.5)	39 (24.1)	6 (3.7)	162 (80.2)	χ^2=9.558
No	2 (5)	21 (52.5)	17 (42.5)	0 (0)	40 (19.8)	p=0.023*
Level of knowledge of CAM methods						
Poor	1 (2.7)	18 (48.6)	17 (45.9)	1 (2.7)	37 (18.3)	χ^2=44.015
Medium	19 (13.8)	80 (58)	37 (26.8)	2 (1.4)	138 (68.3)	p=0.000*
Good	14 (51.9)	8 (29.6)	2 (7.4)	3 (11.1)	27 (13.4)	
Use of CAM methods on self						
Yes	26 (17.2)	84 (55.6)	36 (23.8)	5 (3.3)	151(74.8)	χ^2=4.672
No	8 (15.7)	22 (43.1)	20 (39.2)	1 (2)	51(25.2)	p=0.197
Training in CAM during professional life						
Yes	6 (46.2)	2 (15.4)	1 (7.7)	4 (30.8)	13 (6.4)	χ^2=48.899
No	28 (14.8)	104 (55)	55 (29.1)	2 (1.1)	189 (93.6)	p=0.000*
Recommending CAM methods to patients						
Yes	27 (20.1)	69 (51.5)	32 (23.9)	6 (4.5)	134 (66.3)	χ^2=7.841
No	7 (10.3)	37 (54.4)	24 (35.3)	0 (0)	68 (33.7)	p=0.049*
	Education (n=202)				Total n (%)***	χ^2 , p
	High school n (%)	Assoc. degree n (%)	Degree or higher n (%)			
Knowing the difference between CAM methods						
Yes	28 (23.3)	21 (17.5)	71 (59.2)		120 (59.4)	χ^2=10.416
No	19 (23.2)	30 (36.6)	33 (40.2)		82 (40.6)	p=0.005*
Believing in the effectiveness of CAM methods						
Yes	38 (23.5)	33 (20.4)	91 (56.1)		162 (80.2)	χ^2=11.212
No	9 (22.5)	18 (45)	13 (32.5)		40 (19.8)	p=0.004*
Level of knowledge of CAM methods						
Poor	9 (24.3)	17 (45.9)	11 (29.7)		37 (18.3)	χ^2=19.986
Medium	37 (26.8)	29 (21)	72 (52.2)		138 (68.3)	p=0.001*
Good	1 (3.7)	5 (18.5)	21 (77.8)		27 (13.4)	
Use of CAM methods on self						
Yes	35 (23.2)	35 (23.2)	81 (53.6)		151(74.8)	χ^2=1.556
No	12 (23.5)	16 (31.4)	23 (45.1)		51(25.2)	p=0.459
Training in CAM during professional life						
Yes	0 (0)	2 (15.4)	11 (84.6)		13 (6.4)	χ^2=6.730
No	47 (24.9)	49 (25.9)	93 (49.2)		189 (93.6)	p=0.035*
Recommending CAM methods to patients						
Yes	28 (20.9)	30 (22.4)	76 (56.7)		134 (66.3)	χ^2=4.367
No	19 (27.9)	21 (30.9)	28 (41.2)		68 (33.7)	p=0.113
	Gender (n=202)					
	Female n (%)**	Male n (%)**			Total n (%)***	χ^2 , p
Knowing the difference between CAM methods						
Yes	82 (68.3)	38 (31.7)			120 (59.4)	χ^2=7.587
No	70 (85.4)	12 (14.6)			82 (40.6)	p=0.006*
Believing in the effectiveness of CAM methods						
Yes	118 (72.8)	44 (27.2)			162 (80.2)	χ^2=2.547
No	34 (85.0)	6 (15.0)			40 (19.8)	p=0.111
Level of knowledge of CAM methods						
Poor	30 (81.1)	7 (18.9)			27 (13.4)	χ^2=9.283
Medium	108 (78.3)	30 (21.7)			37 (18.3)	p=0.010*
Good	14 (51.9)	13 (48.1)			138 (68.3)	
Use of CAM methods on self						
Yes	113 (74.8)	38 (25.2)			151 (74.8)	χ^2=0.055
No	39 (76.5)	12 (23.5)			51 (25.2)	p=0.815
Training in CAM during professional life						
Yes	7 (53.8)	6 (46.2)			13 (6.4)	χ^2=3.417
No	145 (76.7)	44 (23.3)			189 (93.6)	p=0.065
Recommending CAM methods to patients						
Yes	100 (74.6)	34 (25.4)			134 (66.3)	χ^2=0.082
No	52 (34.2)	16 (23.5)			68 (33.7)	p=0.774

Abbreviations: * p < .05 was accepted **percentage of the row *** percentage of the column.

It was found that most (74.8%) of the health personnel used some kind of CAM method on themselves, and that the three most used methods were herbal remedies (50.2%), massage (29%) and exercise (27.8%). In other studies, the use of CAM methods by health personnel on themselves varied: in some studies the levels of use were low [10, 11, 14, 15], while in others they were high, similar to our findings [1, 6, 16,

17]. In a study of nurses in Taiwan, it was found that CAM methods were sometimes used and that massage was especially preferred [8].

Half of the participants (53%) stated that they used CAM methods for support purposes, and very few (6%) that they used them for the purpose of treatment. It was found that more than half (62.3%) of the health personnel stated that they used CAM methods alongside medical treatment, and only a small proportion (22.5%) used them before medical treatment. In a study with nursing and midwifery students, it was found that 93.5% used CAM and medical treatments together when they were ill [18]. In two different studies on this topic, it was found that doctors recommended the use of CAM methods after conventional treatment had been completed or as a support treatment [19, 20].

It was found in the present study that one in four of the health personnel (22.4%) achieved the expected result with the CAM method which they used, and in more than half (60.3%) relief was seen. The proportion of those who stated that they saw no benefits was observed to be very low (0.7%). Examining the results of various studies conducted with health personnel and students, it can be seen that levels of satisfaction are very high [1, 12, 17].

Examination of the reasons for not using CAM methods, it is seen that almost half of the participants (43.1%) thought that medical treatment was better. Other reasons were that they did not believe in CAM methods (17.6%) and that they found them excessively expensive (13.7%).

It was found that two thirds of the health personnel in the study (65.3%) recommended CAM methods to their family and friends. The proportion of those who recommended them to their patients was similar (66.3%). Comparing these results with the literature, it can be see that the rates of those recommending the use of CAM to family and friends is similar to the present study [1, 17], while the proportion of those recommending them and applying them to patients is lower [5, 8, 13, 15, 16, 19]. The results of the study show that the health personnel recommended CAM methods to their friends and family at a higher rate than they did to their patients. When asked why they did not recommend CAMmethods, they gave such answers as not having enough knowledge (45.6%), the effects and side effects of the methods not being clear (26.5%), and the legal framework being inadequate (23.5%). Examining the literature, the commonest reasons were found to be not having sufficient knowledge of CAM methods [8, 13, 17, 21], inadequacy of the legal framework or hospital policies [8], considering the methods ineffective or outmoded [11] and engendering extra costs or delaying the effect of conventional treatment [20].

Half of the participants (53%) stated that they asked patients whether they used CAM. This proportion is seen to be low compared with the literature [10, 22]. A large proportion of patients who use CAM are unwilling to admit it. The main reason for this is inadequate communication between the patient and health personnel [21]. It is very important to establish good communication with the patient in order to lessen the risks of wrong use of CAM methods [23].

A third of the health personnel (776.8%) stated that they knew the CAM methods used by their patients, and that the most commonly used methods were massage (45.3%), herbal remedies (44.5%) and hot springs (33.6%). In a study of patients with rheumatoid arthritis this country, the three most commonly used methods were oral herbal treatments (54.5%), nutritional supplements (41.2%), and mind-body practices (40.5%) [24]. In a study conducted in Pakistan, it was found that 59.3% of patients used CAM methods, with the most commonly used methods being herbal treatments and homeopathy [11].

Most of the health personnel in the present study (93.6%) were found not to have had any training in the application of CAM. It is of great importance that health personnel should have knowledge of CAM methods so as to be able to offer advice to patients and their relatives about these methods [25]. However, an examination of the literature shows, similarly to the results of this study, that the levels of formal or informal education of health personnel on CAM methods are low [1, 8, 15, 19, 20]. Therefore, health personnel, who play an important role in affecting the health beliefs and behavior of patients towards CAM, should certainly receive adequate and effective training in this matter.

More than half of the participants (57.9%) were positive to the idea of training in CAM methods before and after graduation. Studies conducted with health workers and students have shown that they have a positive attitude to CAM methods being added to the curriculum [1, 12, 17, 18, 22].

Evaluation of health personnel knowledge and use of CAM methods

The five CAM methods most known by the health personnel in the study were, in order, herbal (96.5%), showers (92.1%), hot and cold application (89.6%), massage (87.1%), and religious methods (86.1%). In a study by Tracy et al. (2003), the five methods which intensive care nurses had the best knowledge of were diet, exercise, massage, prayer and music therapy [26]. In two studies conducted with students, it was found

that the best known CAM methods were massage [12], diet [12], vitamins [12], plant products [12, 17], prayer [12, 27] and hypnosis [12].

Among the CAM methods which were least known by the participants were chiropractic, homeopathy, ayurveda, hypnotherapy and acupressure. In order to prevent misuse by patients and to promote correct and safe use, it is important that health personnel should have knowledge of CAM methods and to channel this knowledge [1]. In a study by Türker et al. (2011) conducted with students, it was found that the least known CAM methods were chiropractic, ayurveda and homeopathy [27]. The results of the present study show similarities at certain points to the literature.

The five methods most used by health personnel in the study were, in order, herbal methods (90.1%), showers (89.1%), hot and cold application (84.7%), religious methods (76.7%), and nutrition (75.7%). The least used methods were chiropractic (1%), homeopathy (2%), ayurveda (2%), hypnotherapy (3.5%), and acupressure (6.4%). According to these findings it can be said that health personnel preferred to use the methods which they knew best. Examining other studies, it can be seen that the CAM methods commonly used by health personnel are massage [6, 22], herbal treatment [1, 6, 10], meditation [6], touch therapies [6], worship [6], bathing [1], exercise [22] and diet [22].

Comparison of the attitudes of health personnel to CAM methods and their profession, education and gender

It was found that the age, place of work and professional experience of health personnel did not affect their attitudes to CAM methods (knowledge of CAM methods, belief in their effectiveness, training in CAM methods, recommendation of CAM methods to patients and use of CAM methods on themselves). However, in a study conducted in Germany by Längleret al. with child oncology doctors, it was found that the knowledge levels of young doctors were higher [20].

It was found that the participants' profession, education and gender affected their attitudes to CAM methods (knowledge of CAM methods, belief in the effectiveness of the methods, training in CAM methods, and recommendation of CAM methods to patients). It was seen that the level of knowledge of CAM methods of doctors was significantly higher than that of other health personnel. The levels of belief in the effectiveness of CAM methods, recommendation of CAM methods to patients and training in CAM methods were found to be significantly higher in nurses. In two studies of health personnel working in oncology departments, it was reported that doctors paid less attention to CAM methods than did other health personnel [13, 28]. In a study by Adib-Hajbaghery et al. (2014), the professional group which recommended CAM methods to patients was nurses, and the group that recommended them the least was physicians. In the same study, it was reported that doctors used CAM methods more but recommended them less, while with nurses the usage level was low but they recommended them more. Also in this study, it was found that health personnel educated to university degree level or higher had significantly higher opinions of CAM methods. Female health personnel were found to have greater knowledge of CAM methods than their male colleagues, and their attitudes were more positive [1]. In a study conducted by Risberg et al. (2004) with health workers working in the field of oncology, it was seen that females had more positive attitudes to CAM methods [28]. Examining the literature, results are different. In a study by Kohl HL et al. (2003), it was found that pharmacists did not differ by gender in their use of CAM [17]. In a study by Tokem et al. (2014), it was found that gender, economic status, marital status age and education level did not affect CAM use [24].

CONCLUSIONS AND RECOMMENDATIONS

The findings of this study showed that the health personnel knowledge of CAM methods was high, they showed a positive attitude to them and that most used at least one CAM method. More than half of the health personnel used CAM methods for support purposes and along with medical treatment. Although a majority of the health personnel had received no training in CAM methods, approximately two thirds of them recommended these methods to their patients, friends and families. Moreover, they looked positively on the addition of CAM methods to education curricula. Doctors, those with a high level of education and female health personnel had more knowledge of CAM methods, while nurses and female health personnel had a higher opinion of them.

In conclusion, it is recommended that in order to prevent any problems which might arise from the use of CAM by patients, health personnel should inquire into the use of CAM methods by their patients and that they should be able to provide information to patients after receiving training in CAM.

Limitations of the study

This study cannot be generalized to the country as whole. An evaluation was made of health personnel knowledge and use of CAM methods according to their perceptions.

Disclosures and Acknowledgements

The authors declare that there is no conflict of interest.They extend their sincere thanks to all health professionals who participated in this study so willingly.The authors have disclosed that they have no significant relationships with, or financial interest in, any commercial companies pertaining to this article.

REFERENCES

1. Adib-Hajbaghery M, Hoseinian M. Knowledge, attitude and practice toward complementary and traditional medicine among Kashan health care staff. Complement Ther Med. 2014; 22(1):126-132.
2. Hessig RE, Arcand LL, Frost MH. The effects of an educational intervention on oncology nurses' attitude, perceived knowledge, and self-reported application of complementary therapies. Oncol Nurs Forum. 2004; 31:71-78.
3. Holroyd E, Zhang AL, Suen LK, Xue CC. Beliefs and attitudes towards complementary medicine among registered nurses in Hong Kong. Int J Nurs Stud. 2008; 45:1660-1666.
4. Sadighi J, Maftoon F, Moshrefi M. Complementary and alternative medicine (CAM): knowledge, attitude and practice in Tehran, Iran. Payesh Health Monit. 2004; 3:279-289.
5. Shorofi SA, Arbon P. Nurses' knowledge, attitudes, and Professional use of complementary and alternative medicine (CAM): a survey at five metropolitan hospitals in Adelaide. Complement Ther Clin Pract. 2010; 16(4):229-234.
6. Samuels N, Zisk-Rony RY, Singer SR, Dulitzky M, Mankuta D, Shuval JT, et al. Use of and attitudes toward complementary and alternative medicine among nurse-midwives in Israel. Am J Obstet Gynecol. 2010; 203(4):341.e1-7.
7. Bjersa K, Victorin ES, and Olsé MF. Knowledge about complementary, alternative and integrative medicine (CAM) among registered health care providers in Swedish surgical care: a national survey among university hospitals. BMC Compl Alternative Med. 2012; 12(42):1-10.
8. Chu FY, Wallis M. Taiwanese nurses' attitudes towards and use of complementary and alternative medicine in nursing practice: a cross-sectional survey. Int J Nurs Stud. 2007; 44(8):1371-1378.
9. Trail-Mahan T, Mao CL, Bawel-Brinkley K. Complementary and Alternative Medicine: Nurses' Attitudes and Knowledge. Pain Manag Nurs. 2013;14(4):277-286.
10. Vlieger AM, vanVliet M, Jong MC. Attitudes towards complementary and alternative medicine: national survey among paediatricians in the Netherlands. Eur J Pediatr. 2011; 170(5):619-624.
11. Junaid R, Abaas M, Fatima B, Anis I, Hussain M. Attitude and practice of patients and doctors towards complementary and alternative medicine. J Pak Med Assoc. 2012; 62(8):865-868.
12. Uzun O, Tan M. Nursing students' opinions and knowledge about complementary and alternative medicine therapies. Complement Ther Nurs Midwifery. 2004; 10:239–244.
13. Trimborn A, Senf B, Muenstedt K, Buentzel J, Micke O, Muecke R, et al. Attitude of employees of a university clinic to complementary and alternative medicine in oncology. Ann Oncol. 2013; 24(10):2641-2645.
14. Zoe R, Charalambous C, Popi S, Maria R, Aris V, Agoritsa K, et al. Cypriot nurses' knowledge and attitudes towards alternative medicine. Complement Ther Clin Pract. 2014; 20(1):89-92.
15. Posadzki P, Alotaibi A, Ernst E. Prevalence of use of complementary and alternative medicine (CAM) by physicians in the UK: a systematic review of surveys. Clin Med. 2012; 12(6):505-512.
16. Charlie CL Xue, Anthony L Zhang, Eleanor Holroyd, Lorna KP Suen. Personal use and Professional recommendations of complementary and alternative medicine by Hong Kong registered nurses. Hong Kong Med J. 2008; 14(2):110-115.
17. Koh HL, Teo HH, Ng HL. Pharmacists' patterns of use, knowledge, and attitudes toward complementary and alternative medicine. J Altern Complement Med. 2003; 9(1):51-63.
18. Çamurdan Ç, Gül A. Complementary and alternative medicine use among undergraduate nursing&midwifery students in Turkey. Nurse Educ Pract. 2013; 13(5):350-354.
19. Gallinger Z, Bressler B, Devlin SM, Plamondon S, Nguyen GC. A survey of perceptions and practices of complementary alternative medicine among Canadian gastroenterologists. Can J Gastroenterol. 2014; 28(1):45-49.
20. Längler A, Boeker R, Kameda G, Seifert G, Edelhäuser F, Ostermann T. Attitudes and beliefs of paediatric oncologists regarding complementary and alternative therapies. Complement Ther Med. 2013; 21(1):10-19.
21. Cindy Wang SY, Yates P. Nurses' responses to people with cancer who use complementary and alternative medicine. Int J Nurs Pract. 2006; 12(5):288-294.
22. Cooke M, Mitchell M, Tiralongo E, Murfield J. Complementary and alternative medicine and critical care nurses: a survey of knowledge and practices in Australia. Aust Crit Care. 2012; 25(4):213-223.
23. Hübner J, Hanf V. Commonl Use Methods of Complementary Medicine in theTreatment of Breast Cancer. Breast Care. 2013; 8:341–347.
24. Tokem Y, Parlar Kilic S, Ozer S, Nakas D, Argon G. A multicenter analysis of the use of complementary and alternative medicine in Turkish patients with rheumatoid arthritis: holistic nursing practice review copy. Holist Nurs Pract. 2014; 28(2):98-105.
25. Amanak K, Karaöz B, Sevil Ü. Alternative/Complementary Medicine and Women's Health. TAF Prev Med Bull. 2013; 12(4):441-448.
26. Tracy MF, Lindquist R, Watanuki S, Sendelbach S, Kreitzer MJ, Berman B, et al. Nurse attitudes towards the use of complementary and alternative therapies in critical care. Heart Lung. 2003; 32(3):197-209.
27. Turker T, Kilic S, Kocak N, Acikel C, Turk YZ, Kir T. Knowledge and attitudes toward complementary and alternative medicine amongst Turkish nursing students. Pak J Med Sci. 2011; 27(2):379-383.
28. Risberg T, Kolstad A, Bremnes Y, Holte H, Wist EA, Mella O, et al. Knowledge of and attitudes toward complementary and alternative therapies; a national multicentre study of oncology professionals in Norway. Eur J Cancer. 2004; 40(4):529-535.