

Original Article

An Investigation on the Knowledge, Attitudes and Behaviours to Complementary and Alternative Therapies among Physicians, Nurses, Patients and Patients' Relatives

Mehmet Karakas, PhD

Department of Nursing, Bolu Abant Izzet Baysal University, Faculty of Health Sciences, Bolu, Turkey

Nermin Gurhan, PhD

Assoc. Prof. Gazi University, Faculty of Health Sciences, Ankara, Turkey

Umran Demircan, PhDc

Gazi University, Graduate School of Health Sciences, Ankara, Turkey

Ismail Hiizli

Near East University, Graduate School of Social Sciences, Nicosia, Cyprus

Haydar Mehmet Kaya, PhDc

Gazi University, Graduate School of Health Sciences, Ankara, Turkey

Feride Ercan

Gazi University, Faculty of Health Sciences, Ankara, Turkey

Correspondence: Karakas, Mehmet; Lecturer, Department of Nursing, Bolu Abant Izzet Baysal University, Faculty of Health Sciences, Bolu, Turkey e-mail: karakasmehmet@ibu.edu.tr

Abstract

Background: Complementary and alternative treatment (CAM) methods have been practiced in every country since ancient times. Although it is used in different types and shapes in each group, it is very popular in recent years.

Aim: The study aimed to assess the knowledge, attitudes and behaviours to CAM among physicians, nurses, patients and patients' relatives and to investigate this relationship according to positions.

Method: The study designed in cross-sectional and descriptive type of study was performed in a private hospital. A personal information form was used to collect data for the study. The Pearson Chi-square test was used to examine the relationship between two or more qualitative variables.

Findings: The study was conducted used totally 350 participants, including 57 of who were physicians, 114 nurses, 23 patients and 156 patients' relatives. The average age of study participants, 64.9% of whom were women and 61.4% single, was 30.34 ± 9.01 . Of the participants, while 53.1% said that they believed in the effectiveness of CAM methods, 61.1% said they thought complementary and alternative treatment techniques should be supported within the scope of the health insurance system. Besides, 33.7% of the participants expressed using CAM methods, and 77.4% said they thought that there was no difference between complementary and alternative medicine.

Conclusions: The study found, by the position of participants, a significant difference between their usages of techniques other than medical treatment, their opinions on whether CAM poses health risks and their views on whether there is any difference between complementary and alternative medicine and their cognisance of animal-assisted therapy ($p < 0.05$). On the other hand, the study found no significant difference between participants' usage of CAM and age, gender, civil status, economic condition and whether the participant or a family member has a history of a chronic disease ($p > 0.05$).

Keywords: Complementary treatment, Alternative treatment, Physicians, Nurses

Introduction

CAM practices mainly refer to the fact that individuals have their own healing powers, but this

should be revealed. The notion of CAM is primarily based on the assumption that every individual has internal self-healing powers which, however, should be stimulated in some way or other. Research

suggests, in this context, that unbalanced conditions that occur in one's body could be handled as diseases, and one, however, would completely recover when such conditions have been eliminated (Bulduklu, 2015). People use CAM techniques for a variety of reasons, such as the desire to live a longer and healthy life, reducing the adverse effects of drugs, strengthening the immune system, driving away the feeling of hopelessness, treatment of diseases and alleviating and/or eliminating the complaints. The wide-ranging usage of CAM techniques for many purposes has led to an increasing appeal of CAM all over the world (Turan, Ozturk & Kaya, 2010; WHO, 2001). All over the world including Turkey, there is an increasing tendency to use complementary and alternative medicine (CAM) particularly in recent years. One third of the population across the world and half of the population in poorer regions like those in Africa make use of CAM (WHO, 2001). A great variety of CAM techniques are used in the world, with, for instance, more than 200 complementary treatment techniques according to the National Center for Complementary and Alternative Medicine (NCCAM, 2016). Several factors affect the usage of CAM techniques, including the conviction that alternative medicine is effective (Singh, Maskarinec & Shumay, 2005) and harmless (Akyol & Oz, 2011), its cost-effectiveness (Sadiq, Khajuria & Khajuria, 2017), being inspired by media, friends or healthcare providers (Farooqui et al., 2012), medical history (Micke et al., 2009) and religious belief (Jones et al., 2007). The use of CAM methods for many people and for different situations does not only mean the increase in the number of beneficiaries from these applications. This may also mean an increase in the number of people who can be harmed by unconscious and misuse. As is the case all over the world, CAM has grown into a significant market in Turkey as well, which has paved the way, unfortunately, for an environment where people who have no knowledge and authorisation in this field can apply CAM, besides the application by, as it should be, healthcare providers and people duly trained and authorised to apply such treatments. There have, however, been initiatives in Turkey to standardise the applications in this field. To this end, for instance, a regulation titled "Regulation on the Applications of Traditional and Complementary Medicine" was issued and came into effect after its publication in the Official Gazette Nr. 29158 on 27 October 2014 (RTMH, 2014). This regulation sets the scope of CAM applications and provides for a specific procedure as to who can perform CAM and where the treatment can take place. Mention is made, in this context, of 15 techniques of alternative medicine, which are acupuncture, apitherapy, phytotherapy, hypnosis, homeopathy, leech therapy, chiropractic, vacuum cup application, larva therapy, mesotherapy, prolotherapy, osteopathy, ozone therapy, reflexology and music therapy (RTMH, 2014). However, although this

regulation is an important step on behalf of our country, unfortunately, it is a significant disadvantage that it is not clearly stated which / which of these applications can be used for which condition or diseases. It is therefore of essential importance to clearly define which of these techniques would be used for which conditions or diseases, in order to use these techniques in a proper and effective way to prevent probable adverse effects.

Research on CAM usage has reported that people in diverse regions around the world make use of CAM, with, for example, at least 75% of the population in Zambia, 80% of people who live in rural areas in South Africa and between 15 and 70% of the population in Canada (WHO, 2001). A literature review conducted by Ernst and Cassileth (1998) in the USA on 26 studies carried out on cancer patients in 13 countries concludes that the usage of CAM in general varies between from 7 to 64%, and the average prevalence across all the studies reviewed is 31.4%. There are no clear statistics available on the usage of alternative medical methods in Turkey, but numerous studies have attempted to provide insight into the subject. Research on cancer patients, for example, has reported rates of alternative medicine use ranging from 22.1% to 84.1% (Kav, Hanoglu & Algier, 2008). Another study performed with employees in the banking sector reports that 56.7% of the employees make use of CAM (Arı & Yilmaz, 2016). Research is also available reporting that 87% of families with lower income levels use these methods for their children (Tasar et al., 2011). One study performed on patients who presented to a psychiatry polyclinic reported a usage rate of 39.7% (Bal et al., 2017). Another study conducted with healthcare professionals and patients demonstrated that physicians (30.9%), nurses (49.3%) and patients (48.7%) drew upon CAM techniques (Kocdas, 2013). Studies performed on this subject indicate notably high rates of CAM use in Turkey. The terms 'traditional, complementary and alternative medicine' are often interchangeably used in Turkey and some other countries. But while complementary medicine comprises methods that are applied along with biomedical techniques used by healthcare personnel, alternative medicine rather refers to the usage of one of the methods that are alternative to this treatment (Bulduklu, 2015; Ozcebe & Sevensan, 2009). Misuse or misapplication of CAM methods can lead to undesirable outcomes (Loquai et al., 2017). In this context, it is of great importance that healthcare professionals have adequate knowledge on the usage fields of CAM techniques and their benefits and harms, and duly inform people in this respect (Lafcı & Kasıkcı, 2014; Turan, Ozturk & Kaya, 2010). In their study performed with healthcare personnel, Lafcı and Kasıkcı (2014) reported that 75% of the participants had poor knowledge on CAM methods, and that they requested that knowledge on CAM methods should be

integrated in curricula of vocational education, or training on CAM should be provided in the post-graduation period. This shows the poor knowledge level of people and healthcare professionals alike.

In Turkey individuals other than health workers, patients, medical and nursing students' knowledge and attitudes toward CAM use, there are many researches (Aktas, 2017; Ari & Yilmaz, 2016; Bal et al., 2017; Col-Araz, Tasdemir & Kılıç, 2012; Kav, Hanoglu & Algier, 2008; Tasar et al., 2011). But, there are fewer studies (Kocdas, 2013; Lafcı & Kasıkcı, 2014) that examine the knowledge and attitudes of healthcare workers about CAM use. In particular, it should be remembered that physicians and nurses are of great importance as a guide for CAM applications. This study, is intended to provide an overview of both groups that make up both users and practitioners for CAM applications, who what uses what for which disease. In this context, it is very important to emphasize the similarities and dissociation in terms of CAM applications by considering physicians and nurses as well as patient and patient relatives together. It is thought that this dimension of the study will shed light on future studies. For this reason, it is of major importance to assess the knowledge, attitudes and behaviours to CAM techniques among physicians, nursing staff, patients and patients' relatives.

Method

Subjects and design: This study performed in cross-sectional and descriptive design was conducted in a private hospital. The population of the study consisted of 295 physicians and 520 nurses working in the hospital involved and patients who presented to the hospital between March and June in 2017 and their relatives. No exclusion criteria were defined for the study, and no sample was selected. The sample consisted of 350 people, who were employed or received treatment in the hospital at the time of the study and agreed to participate in the study and completely filled in the data collection forms, 57 of whom were physicians, 114 nurses, 23 patients and 156 patients' family members. A "Personal Information Form" developed by the researchers based on ethnographic observation and models available in the literature was used to collect study data. Those who were not want to participate in the study (106) and those who completed the forms (56) were excluded from the study. A form was filled in by interviewing the participants face to face. Each the form took approximately 35 min for completion.

Personal information form: This form that was developed by the researchers based on models available in previous research and ethnographic

observations is composed of four sections. The first section deals with socio-demographic characteristics such as age, gender, civil status, economic condition, profession and domicile place. The second section includes questions about whether the participant finds CAM methods risky, usage of CAM methods, whether the participant visits CAM clinics and whether the patient or anybody else in the family has a history of chronic disease. The third section of the form includes open-ended questions for the participants to express their opinions. Some examples of these questions are; "what do you think about supporting TAT methods under the health insurance system?", "Do you think there is a difference between alternative medicine and complementary medicine, why?." The fourth section comprises a table that includes all the CAM methods in Turkey. The table was with statements designed to evaluate whether the participants have heard of, used and are cognisant of CAM techniques.

Data analysis: All data were analyzed using the SPSS version 20.0 software (IBM Corp.). Descriptive statistics, which included percentages, frequencies, means, and standard deviations, were used to define the sample characteristics. The compliance of all the numeric data with normal distribution was evaluated using the Shapiro–Wilk test. Chi-Squared analysis was performed to assess the intergroup socio-demographic and categorization data. Statistical significance for tests was $p < 0.05$.

Ethical considerations: The study was performed in compliance with the principles of the Helsinki Declaration and approved by the İstanbul Medipol University local Board of Inspection for Institutions (No:10840098-604.01.01-E.4242/2017). Written consent covering the whole scope of the study was also obtained. All information was obtained anonymously, and each respondent was adequately informed regarding the aims, methods, and expected benefits of the study. They were told that there was no cost to participate in this study.

Findings

The average age of study participants, 64.9% of whom were women and 61.4% single, was 30.34 ± 9.01 . The study found that more than half (56.6%) of the participants and their family members (51.7%) had a history of chronic disease. On the other hand, 58% of the participants or their relatives had had a serious disease over the past year. The results indicate that the methods the study participants were mostly aware of or knew about best were cupping (89.7%), massage (87.7%) and leech therapy (82.9%), the most commonly used methods were phytotherapy (27.9%), leech therapy (21.1%) and cupping (22.0%) (Table 1).

Table 1. Socio-demographic characteristics of participants

n=350		Number	%
Age	Average age of nurses (27. 14 ± 6.80)	114	32.6

Av. age of physicians (31.35 ±9.82)	57	16.3
Av. age of patients (33.65 ±9.13)	23	6.6
Av. age of patients' relatives (31.81 ±9.52)	156	44.6
Gender		
Women	227	64.9
Men	123	35.1
Civil Status		
Married	135	38.6
Single	215	61.4
History of Chronic Disease in the Participant		
Yes	198	56.6
No	152	43.4
History of Chronic Disease in Family Members		
Yes	181	51.7
No	169	48.3
History of a serious disease in the participant or family		
Yes	203	58.0
No	147	42.0
Most commonly used CAM methods (n=118)		
Phytotherapy	33	27.9
Leech therapy	25	21.1
Cupping	26	22.0
Other therapys	34	27.8
CAM methods participants are cognizant of or have good knowledge about *		
Ozone treatment	267	76.3
Acupuncture	288	82.3
Ayurveda	59	16.9
Chiropractic	43	12.3
Massage	307	87.7
Phytotherapy	186	53.1
Acupressure	61	17.4
Hypnosis	266	76.0
Homeopathy	101	28.9
Megavitamin treatment	83	23.7
Biofeedback	83	23.7
Spiritual treatment	52	14.9
Aromatherapy	132	37.7
Hydrotherapy	119	34.0
Osteopathy	77	22.0
Yoga	267	76.3
Naturopathy	56	16.0
Reflexology	88	25.1
Therapeutic touch	104	29.7
Reiki	89	25.4
Tai chi chuan	46	13.1
Feng shui	118	33.7
Imagination	68	19.4
Meditation	213	60.9

Bio-energy	167	47.7
Music therapy	251	71.7
Dance therapy	233	66.6
Art therapy	230	65.7
Religious treatment (praying)	258	73.7
Leech therapy	290	82.9
Cupping	314	89.7
Treatment by traditional bonesetter	284	81.1
Vacuum cup treatment	267	76.3
Bright light therapy	122	34.9

*n multiplied (because of the participants who responded to more than one option)

Table 2. Responses of the participants to the question whether CAM methods should be supported within the scope of healthcare insurance system broken down by position

n=349		Yes	%	No	%	No Idea	%	Total	%
Position	Nurses	73	64	14	12.3	27	23.7	114	32.7
	Physicians	34	59.6	10	17.5	13	22.8	57	16.3
	Patients	16	69.6	1	4.3	6	26.1	23	6.6
	Patients' relatives	92	59.4	24	15.5	39	25.2	155	44.4
	Total	215	61.6	49	14	85	24.4	349	100

Table 3. Relationship between CAM usage and certain variables

Variables	CAM users (n=118)	Non-users of CAM (n=232)	Analysis *
Gender			
Women	82 (%69.5)	145 (%62.5)	$\chi^2=1.677$ p=0.195
Men	36 (%30.5)	87 (%37.5)	
Civil status			
Married	38 (%32.2)	97 (%41.8)	$\chi^2=5.805$ p=0.055
Single	75 (%63.6)	117 (%50.4)	
Divorced/widow	5 (%4.2)	18 (%7.8)	
History of a chronic disease			
Yes	60 (%50.8)	138 (%59.5)	$\chi^2=2.374$ p=0.123
No	58 (%49.2)	94 (%40.5)	
History of a chronic disease in family			
Yes	61 (%51.7)	120 (%51.7)	$\chi^2=0.000$ p=0.996
No	57 (%48.3)	112 (%48.3)	
Economic condition			
Low	16 (%13.6)	26 (%11.2)	$\chi^2=1.378$ p=0.502
Medium	62 (%52.5)	137 (%59.1)	
Good	40 (%33.9)	69 (%29.7)	

* Pearson chi-square test p>0.05

Table 4. The relationship between CAM usage of study subjects and their opinions about whether there is a difference between alternative and complementary medicine broken down by subjects' position

n=350		CAM	Users	%	Non-users	%
USI	Nurses		52	44.1	62	26.7
	Physicians		21	17.8	36	15.5

	Patients	9	7.6	14	6.1
	Patients' relatives	36	30.5	120	51.7
	Total	118	100	232	100
Difference between alternative and complementary medicine		Different	%	Not different	%
Position^b	Nurses	34	43.0	80	29.5
	Physicians	12	15.2	45	16.6
	Patients	9	11.4	14	5.2
	Patients' relatives	24	30.4	132	48.7
	Total	79	100	271	100

^a Pearson chi-square test: 15.674, p:0.01<0.05; ^b Pearson chi-square test: 11.726, p:0.08<0.05

Table 5. Opinions of the participants on whether CAM methods are risky broken down by their positions

n=350		Risky	%	Not risky	%	No idea	%
Position	Nurses	28	34.1	50	40.0	36	25.2
	Physicians	14	17.1	23	18.4	20	14.0
	Patients	9	11.0	6	4.8	8	5.6
	Patients' Relatives	31	37.8	46	36.8	79	55.2
	Total	82	100	125	100	143	100

Pearson chi-square test =14.837, p:0.022<0.05

Table 6. Participants' cognizance of PET therapy broken down by their positions

n=350		Cognisant	%	Never heard of it	%
Position	Nurses	28	50.9	86	29.1
	Physicians	17	30.9	40	13.6
	Patients	3	5.5	20	6.8
	Patients' Relatives	7	12.7	149	50.5
	Total	55	100	295	100

Pearson chi-square test =30.275, p:0.00<0.05

The results indicate that 61.6% of the study subjects are of the opinion that CAM methods should be supported within the scope of healthcare insurance system (Table 2).

The study found no statistically significant relationship between CAM usage and certain variables such as age, gender, civil status, economic condition and history of chronic disease in the participant or in any family member (p>0.05) (Table 3).

The study found, based on data broken down by subjects' positions, a statistically significant difference between their usage of CAM and their opinions about whether there is a difference between alternative and complementary medicine (p<0.05). The results show that the significant relationship about the use of CAM techniques resulted from the nursing staff. Another result is that while the group that used CAM applications most often was nurses, it was the relatives of patients that used it the least. The variable that affected the significant relationship

between those who believed there was a difference and those who believed there was no difference between alternative and complementary medicine originated from the group of patient's relatives who held the opinion that there was a difference and also from those who believed there was no difference. While the majority of the nurses believed that there was a difference, the majority of patient's relatives held the opinion that there was no difference (Table 4).

The study found a statistically significant relationship between the subjects' positions and their opinions on whether they found CAM methods risky (p<0.05). The variable that influenced the significant relationship was the group of patients' relatives who had no idea about CAM techniques; it was also this group who expressed in majority CAM methods being risky in terms of health. The majority of the nurses, on the other hand, expressed CAM techniques not being risky for health (Table 5).

The study found a statistically significant relationship between their positions and their cognisance of animal-assisted therapies (AAT) therapy ($p < 0.05$). The variables that affected the significant relationship were found to be the nurses, physicians and relatives of patients who were familiar with AAT and those who had never heard of it. While the nurses had the most knowledge on AAT, the group of patients' relatives had the least understanding in this respect (Table 6).

Discussion

The study found no significant relationship between CAM usage and certain variables such as age, gender, marital status, economic condition and history of chronic disease in the participant or any family member. There are similar studies in the literature showing that there is no significant relationship between CAM use and income condition and marital status (Gungormus & Kiyak, 2012; Guven et al., 2013). This shows that CAM use is similar at all socio-economic levels, age and gender. However, it is an important finding that should not be ignored since the use of CAM varies in terms of positions. Because the level of knowledge of CAM is expected to make a difference between CAM practitioners and CAM users.

The results show that the CAM techniques which the study participants most frequently used were phytotherapy, leech therapy and cupping. The results of research performed in Turkey show that herbal treatment is the most frequently used CAM method whatever the age, community or disease group (Araz, Harlak & Mese, 2007; Cevik & Selcuk, 2019; Col-Araz, Tasdemir & Kılıc, 2012; Irmak et al., 2019; Kutlu et al., 2009; Sagkal et al., 2013; Tasar et al., 2011; Ugurluer et al., 2007;). The main reasons why phytotherapy is widely preferred lie in the facts that they are cheap and easily accessible and are used in every sphere of life, and also that they are not considered as harmful. For this reason, physicians and nurses should especially be well-informed and conscious about herbal therapies and other CAM methods, the use of which has become ever increasingly popular.

This study the usage of CAM methods broken down by participants' positions, the study found a significant relationship with regard to the nurses that used CAM methods. The rate of CAM usage that has emerged from the present study is similar to those reported in research (Bal et al., 2017; Kav, Hanoglu & Algier, 2008; Ozeren, Kivanc-Altunay & Koslu, 2004) in Turkey and abroad (MacLennan, Myers & Taylor, 2006; Molassiotis et al., 2005; Norred, Zamudio & Palmer, 2000). The fact that the study found a statistically significant difference with regard to nurses, which is the group that enjoys the highest level (44.1%) of CAM usage, suggests that this group displays a more positive approach in terms of the use

of CAM methods. This result, nurses they can assume an active role with respect to creating awareness and can providing pioneering.

While 23.4% of the participants were of the opinion that CAM methods were risky, 53% believed that these were effective treatment methods. In the study, it was found respect to the patients' relatives who had no idea about CAM methods, CAM methods to be thinks more risky. In our country, we observe that positive effects of CAM methods in respect of health are generally underlined in the majority of previous studies (Col-Araz, Tasdemir & Kılıc, 2012; Ozcakır et al., 2007), and that those who believe that CAM is risky are in minority. Similarly, in the present study, the greater majority of the participants and nurses said they believed that CAM methods are not risky. This may explain why CAM methods are used more often by nurses, but because it does not provide any data as to which methods are used for which conditions, it provides no insight with respect to the effectiveness and suitability of the methods applied. It is, however, of great importance to raise awareness that greater care should be taken in this respect, and that the application could be associated with increased risks depending on the method used. This study found a significant difference with respect to patients' relatives who had no idea about CAM applications. This may be explained by the fact that the patients' relatives may not have been sufficiently informed in this respect, or that their knowledge may not be sufficient to get an idea on this subject, as a result of which they might have taken a cautious approach.

It was found that 61.6% of the participants thought that CAM methods should be evaluated within the scope of health insurance. This ratio is quite high and important. Because, this ratio includes both TAT practitioners and TAT users and, both groups thinks that TAT methods should be evaluated within the scope of health insurance. Participants of the study the reasons; Providing the majority of CAM methods that cannot be applied by themselves in private clinics and for a fee, If it is supported by the state, it will prove to be more scientific, it will open up more places and it will be easy to reach' have expressed with such expressions.

The study found that there is a difference between alternative medicine and complementary medicine because of from patient relatives. Even though World Health Organisation (WHO) defines CAM as treatment approaches other than modern medicinal methods, it is more correct to make a distinction between these notions (NCCAM, 2016; Ozcebe & Sevencan, 2009). Some studies found that CAM methods can delay (Col-Araz, Tasdemir & Kılıc, 2012) or prevent people from receiving (Gungormus & Kiyak, 2012) complete and correct treatment. Researches suggest that the decision on whether to use CAM as an alternative or as a complementary

application would affect the benefits and harms of these techniques.

Of the study participants, 15.7% had heard about AAT and 2.2% had used it. There was no difference between the positions of the participants and the hearing status of AAT therapy only in the patient group. This state may have been due to the small sample. AAT is a new area in Turkey and is not widely used yet. No research has been found in Turkey that investigated this type of CAM application, but it is an area that has attracted broad interest in other countries. For example, in a study performed with 60 men with AIDS who had AATs, Castelli et al. (2001) report that AATs help people cope with loneliness and create a supporting effect, boosting their relations with their friends and family members. In another study, Sobo et al. (2006) applied AAT with dogs in paediatric pain management. The results of their study indicate that AAT distracts children's attention away from pain sensation, and that it would be helpful in pain management because it probably sets soothing thoughts in motion in favour of creating a sentiment of friendship or home environment. Other studies on animal-assisted therapies have shown that such therapies can create numerous positive effects such as reducing aggressive behaviours (Nurenberg et al., 2015; Richeson, 2003), improving social skills and increasing self-confidence (Bizub, Joy & Davidson, 2003) among others. However, it is of essential importance that such therapies should be handled with great care and supported with further research to gain insights on how frequent, for how long and with whom animal-assisted therapies should be performed.

Conclusion

In the study, it was found that there was no relationship between CAM use and age, sex, marital status, presence of chronic disease in himself and his family and economic status. But, according to the position of the participants, it was found that there was a difference between using CAM applications, thinking that CAM was risky in terms of health, hearing AAT and thinking that there was a difference between complementary medicine and alternative medicine. Considering that the most commonly used CAM methods are herbal therapy, acupuncture, and hacamat, and nurses are the most commonly used group, CAM should be included in the nursing/medical curriculum and CAM controlled clinical trials are needed to determine possible effects and side effects. Also, should be investigated which CAM method will be used for which disease, and, drug interaction status with CAM. In addition, the difference between alternative medicine and complementary medicine in terms of patient relatives, and the fact that relatives of patients who have no idea about CAM applications are more risky for CAM applications show that the public does not have

enough knowledge about CAM. Health professionals need to be more effective and pioneer especially in the CAM methods commonly used in our country.

Limitations

The results of this study are subject to some limitations. The study sample was small, even though it consisted of diverse positions and, information on CAM applications is limited only to the qualifications measured by the questionnaire. Another limitation is that since the study was performed only in one institution, the results cannot be extrapolated into the whole country. This limited the range of views expressed and thereby the findings that could be drawn from them. It was aimed to be at least 50 samples for the patient group however, the patient group stated that they did not want to participate in the study because of the reasons such as pain, stress, and questions taking a long time. On the other hand, the relatives of the patients were more willing and participated more in the opposite way from the patient group. The answers given by the participants were deemed correct. Our results should be controlled by different methods.

Where the research took place: Medipol University hospital; info@medipol.com.tr

References

- Aktas, B. (2017). Attitudes of nursing students toward holistic complementary and alternative medicine. *JAREN*, 3(2): 55-59.
- Akyol, A. D., & Oz, B. (2011). The use of complementary and alternative medicine by patients with cancer: in Turkey. *Complementary therapies in clinical practice*, 17 (4): 230-234.
- Araz, A., Harlak, H., & Mese, G. (2007). Health behaviors and alternative medicine use. *TAF Preventive Medicine Bulletin*, 6(2): 112-122.
- Ari, E., & Yilmaz, V. (2016). The Investigation of the Attitudes and Behaviours Regarding the Use of Complementary and Alternative Medicine by a Suggested Structural Model. *Int J of Alanya Faculty of Business*, 8(1): 13-24.
- Bal, U., Cengisiz, C., Yilmaz, E., Karayutug, M. O., & Tamam, L. (2017). Prevalence and characteristics of traditional and complementary medicine utilization in an outpatient psychiatric population. *Cukurova Medical Journal*, 42(3): 533-539.
- Bizub, A. L., Joy, A., & Davidson, L. (2003). "It's like being in another world": demonstrating the benefits of therapeutic horseback riding for individuals with psychiatric disability. *Psychiatric rehabilitation journal*, 26(4): 377-384.
- Bulduklu, Y. (2015). Complementary and alternative medicine practices in context of target group. *Selcuk University Journal of Studies in Turcology*, 1(37): 607-627.
- Castelli, P., Hart, L. A., & Zasloff, R. L. (2001). Companion cats and the social support systems of men with AIDS. *Psychological Reports*, 89(1): 177-187.
- Cevik, C., & Selcuk, K. T. (2019). Prevalence and correlates of the use of complementary and alternative medicine in adults living in a rural area. *Holistic nursing practice*, 33(1): 36-44.
- Col-Araz, N., Tasdemir, H. S., & Kılıç, S. P. (2012). Evaluation of opinions of the faculty of health sciences students about nonmedical alternative and traditional therapies.

- Gumushane University Journal of Health Sciences, 1(4): 239-251.
- Ernst, E., & Cassileth, B. (1998). The prevalence of Complementary/Alternative Medicine in cancer: A systematic review. *Cancer*, 83: 777-782.
- Farooqui, M., Hassali, M. A., Shatar, A. K. A., Shafie, A. A., Seang, T. B., & Farooqui, M. A. (2012). Complementary and alternative medicine (CAM) use by Malaysian oncology patients. *Complementary therapies in clinical practice*, 18(2): 114-120.
- Gungormus, Z., & Kiyak, E. (2012). Evaluation of the knowledge, attitude and behaviors of individuals who suffer from pain towards complementary and alternative medicines. *Agri: The Journal of the Turkish Society of Algology*, 24(3): 123-130.
- Güven, S. D., Muz, G., Efe-Ertürk, N., & Özcan, A. (2013). Use of complementary and alternative treatment in the patients with hypertension. *Balikesir Health Sci J*, 2(3): 160-166.
- Irmak, Z., Tanrıverdi, O., Odemis, H., & Uysal, D. D. (2019). Use of complementary and alternative medicine and quality of life of cancer patients who received chemotherapy in Turkey. *Complementary therapies in medicine*, 44: 143-150.
- Jones, R. A., Taylor, A. G., Bourguignon, C., Steeves, R., Fraser, G., Lippert, M.,... & Kilbridge K. L. (2007). Complementary and alternative medicine modality use and beliefs among African American prostate cancer survivors. *Oncol. Nurs. Forum*, 34(2): 359-364. doi:10.1188/07.ONF.359-364
- Kav, S., Hanoglu, Z., & Algier, L. (2008). Use of complementary and alternative therapy methods in patients with cancer in turkey: A literature review. *Int J Hematol Oncol.*, 18(1): 32-8.
- Kocdas, M. (2013). Knowledge, attitude and behaviours of physicians, nurses and patients about complementary and alternative medicine (pp. 31-42). [Unpublished master's thesis]. Marmara University, İstanbul.
- Kutlu, S., Ekmekci, T. R., Koslu, A., & Purisa, S. (2009). Complementary and alternative medicine among patients attending to dermatology outpatient clinic. *Türkiye Klinikleri J Med Sci*, 29(6): 1496-1502.
- Lafcı, D., & Kasıkcı, M. K. (2014). The knowledge level and using of complementary and alternative therapies of the health personal who working at hospitals. *Gumushane University Journal of Health Sciences*, 3(4): 1-18.
- Loquai, C., Dechent, D., Garzarolli, M., Kaatz, M., Kaehler, K. C., Kurschat, P., ... & Stein, A. (2017). Use of complementary and alternative medicine: A multicenter cross-sectional study in 1089 melanoma patients. *European Journal of Cancer*, 71: 70-79.
- MacLennan, A. H., Myers, S. P., & Taylor, A. W. (2006). The continuing use of complementary and alternative medicine in South Australia: costs and beliefs in 2004. *Medical journal of Australia*, 184(1): 27-31.
- Micke, O., Bruns, F., Glatzel, M., Schonekaes, K., Micke, P., Mucke, R., & Buntzel, J. (2009). Predictive factors for the use of complementary and alternative medicine (CAM) in radiation oncology. *European Journal of Integrative Medicine*, 1(1): 19-25.
- Molassiotis, A., Fernandez-Ortega, P., Pud, D., Ozden, G., Scott, J. A., Panteli, V., ... & Madsen, E. (2005). Use of complementary and alternative medicine in cancer patients: a European survey. *Annals of oncology*, 16(4): 655-663.
- National Center Complementary Alternative Medicine (NCCAM). (2016). National center for complementary and alternative medicine, cam basics. Available from https://nccih.nih.gov/sites/nccam.nih.gov/files/Whats_In_A_Name_06-16-2016.pdf. Accessed 2019, February 07.
- Norred, C. L., Zamudio, S., & Palmer, S. K. (2000). Use of complementary and alternative medicines by surgical patients. *AANA journal*, 68(1): 13-18.
- Nurenberg, J. R., Schleifer, S. J., Shaffer, T. M., Yellin, M., Desai, P., Amin, R., ... & Montalvo, C. (2015). Animal-assisted therapy with chronic psychiatric inpatients: Equine-assisted psychotherapy and aggressive behavior. *Psychiatric Services*, 66(1): 80-86.
- Ozcakir, A., Sadıkoğlu, G., Bayram, N., Mazıcıoğlu, M. M., Bilgel, N., & Beyhan, I. (2007). Turkish General Practitioners and Complementary/Alternative Medicine. *The Journal of Alternative and Complementary Medicine*, 13(9): 1007-1010.
- Ozcebe, H., & Sevenscan, F. (2009). Evaluation of researches about complementary and alternative medicine in children. *J of Pediatr. Health and Dis*, 52: 183-194.
- Ozeren, M., Kivanc-Altunay, I., & Koslu, A. (2004). Investigation of alternative treatment modalities in patients with psoriasis. *The Medical Bulletin of Sisli Etfal Hospital*, 38(4): 27-32.
- Republic of Turkey Ministry of Health (RTMH). (2014). 27 The regulation titled "Regulation on the Applications of Traditional and Complementary Medicine" that published in the Official Gazette Nr. 29158 on 27 October 2014 and its Annexes. Available from www.resmigazete.gov.tr/eskiler/2014/10/20141027.3.htm. Accessed 2019, February 2.
- Richeson, N. E. (2003). Effects of animal-assisted therapy on agitated behaviors and social interactions of older adults with dementia. *American Journal of Alzheimer's Disease & Other Dementia*, 18(6): 353-358.
- Sadiq, S., Khajuria, K., & Khajuria, V. (2017). Complementary and alternative medicine use among type 2 diabetes patients in a tertiary care hospital. *International Journal of Basic & Clinical Pharmacology*, 6(11): 2561-2565.
- Sagkal, T., Demiral, S., Odabas, H., & Altınok, E. (2013). Complementary and alternative treatment methods among elderly individuals in living rural setting. *Firat Univ Health Sci J*, 27(1): 19-26.
- Singh, H., Maskarinec, G., & Shumay, D. M. (2005). Understanding the motivation for conventional and complementary/alternative medicine use among men with prostate cancer. *Integrative cancer therapies*, 4(2): 187-194.
- Sobo, E. J., Eng, B., & Kassity-Krich, N. (2006). Canine visitation (pet) therapy: pilot data on decreases in child pain perception. *Journal of Holistic Nursing*, 24(1): 51-57.
- Tasar, M. A., Potur, E. D., Nursel, K., Bostancı, İ., & Dallar, Y. (2011). The complementary or alternative medicine practices in children of low-income families: Data of Ankara hospital. *Turkish J. Pediatr. Dis.*, 5(2): 81-88.
- Turan, N., Oztürk, A., & Kaya, N. (2010). A New Responsibility in Nursing: Complementary Therapy. *Maltepe University J of Nurs Sci and Art*, 3(1): 93-98.
- Uğurluer, G., Karahan, A., Edirne, T., & Sahin, H. A. (2007). The prevalence and causes of the use of complementary and alternative medicine in patients treated at an outpatient chemotherapy unit. *Van J Med*, 14(3): 68-73.
- World Health Organization (WHO). (2001). Legal status of traditional medicine and complementary/Alternative Medicine: A Worldwide Review. Available from <http://apps.who.int/medicinedocs/pdf/h2943e/h2943e.pdf>. Accessed 2019, February 20.