

Complementary and Alternative Therapy Usage Status and Attitudes of Hypertension Patients

Hilal Gökçe, Eylem Paslı Gürdoğan

<https://doi.org/10.33880/ejfm.2019080202>

Original Research / Orijinal Araştırma

AUTHORS / YAZARLAR

Hilal Gokce

Specialist Nurse, TC Ministry
of Health Sultan I. Murat
State Hospital, Edirne, Turkey
ORCID iD:
0000-0002-9033-0761

Eylem Pasli Gurdogan
(Corresponding Author)

e.gurdogan@gmail.com

Department of Nursing,
Trakya University, Faculty of
Health Sciences, Edirne,
Turkey
ORCID iD:
0000-0003-0711-2112

ABSTRACT

Aim: With the increase in chronic diseases, the number of patients using complementary and alternative medicine is increasing. In this study, it was aimed to examine the opinions and practices of complementary and alternative therapy usage status and attitudes of hypertension patients.

Methods: A descriptive and cross-sectional study consisting of 290 patients was performed with patients who applied to the cardiology and internal diseases outpatient clinic of a public hospital and diagnosed with hypertension. Data were collected by using the patient information form which including socio-demographic form, disease-related characteristics and opinions, and also practices of the patients about the use of complementary and alternative therapies and attitudes towards Holistic Complementary and Alternative Medicine Scale.

Results: The mean age of the patients was 61.52±11.19 and 63.1% were female, 83.4% were married, and 74.8% were at primary school and lower education level. Of patients, 56.9% use complementary and alternative treatment methods in addition to hypertension therapy. 27.3% of them think that they are more effective than drugs, 63% of them do not share the method they use with health care workers. The total score of the Holistic Complementary and Alternative Medicine Scale is 23.05±5.80. The scores are taken out of the scale and the sub-dimensions differ according to the age groups, education level, monthly income status and complementary and alternative treatment methods usage status (p <0.05).

Conclusion: It was found that patients use complementary and alternative methods but do not share them with health care workers, and they have a positive attitude towards holistic complementary and alternative medicine. It is considered important for health care professionals to question the use of these methods in planning the patients' treatment.

Keywords: complementary medicine, alternative medicine, hypertension, patients, attitude

Hipertansiyon Hastalarının Tamamlayıcı ve Alternatif Tedavi Kullanım Durumlarının ve Tutumlarının İncelenmesi

ÖZ

Amaç: Kronik hastalıkların artmasıyla birlikte tamamlayıcı alternatif tedavi kullananların sayısı da artmaktadır. Bu çalışmada, hipertansiyon hastalarının tamamlayıcı alternatif tedavilerin kullanımına yönelik görüş ve uygulamaları ile bu tedavilere olan tutumlarının incelenmesi amaçlanmıştır.

Yöntem: Tanımlayıcı ve kesitsel tipteki araştırma bir devlet hastanesinin kardiyoloji ve iç hastalıkları polikliniklerine başvuran hipertansiyon tanısı konulmuş olan 290 hasta ile yapıldı. Veriler, hastaların sosyo-demografik özellikleri, hastalığa ilişkin özellikleri ve tamamlayıcı alternatif tedavi kullanımına ilişkin görüş ve uygulamalarını içeren "Hasta Bilgi Formu" ve "Bütüncül Tamamlayıcı ve Alternatif Tıbbı Karşı Tutum Ölçeği" kullanılarak toplandı.

Bulgular: Hastaların yaş ortalaması 61,52±11,19 olup, %63,1'i kadın, %83,4'ü evli, %74,8'i ilköğretim ve altı eğitim düzeyindedir. Hastaların %56,9'u hipertansiyon tedavisine ek olarak tamamlayıcı ve alternatif tedavi yöntemlerini kullanmakta, %27,3'ü ilaçlardan daha etkili olduğunu düşünmekte, %63'ü kullandıkları yöntemi sağlık çalışanları ile paylaşmamaktadır. Hastaların Bütüncül Tamamlayıcı ve Alternatif Tıbbı Karşı Tutum Ölçeği toplam puanı 23,05±5,80'dir. Ölçek ve alt boyutlarından alınan puanlar hastaların yaş gruplarına, eğitim düzeyine, aylık gelir durumuna ve Tamamlayıcı ve Alternatif Tıp kullanma durumlarına göre farklılık göstermektedir (p<0.05).

Sonuç: Hastaların Tamamlayıcı ve Alternatif Tıp yöntemlerini kullandıkları ancak sağlık çalışanları ile paylaşmadıkları ve Tamamlayıcı ve Alternatif Tıp yöntemlerine karşı olumlu tutuma sahip oldukları bulundu. Sağlık çalışanlarının hastaların bu yöntemleri kullanım durumlarını sorgulamalarının tedaviyi planlamada önemli olduğu düşünülmektedir.

Anahtar kelimeler: tamamlayıcı tıp, alternatif tıp, hipertansiyon, hastalar, tutum

Date of submission
27.03.2019

Date of acceptance
10.06.2019

How to cite / Atıf için: Gokce H, Pasli Gurdogan E. Complementary and Alternative Therapy Usage Status and Attitudes of Hypertension Patients. Euras J Fam Med 2019;8(2):59-68. doi:10.33880/ejfm.2019080202

Conflict of interest: No conflict of interest was declared by the authors.

Financial disclosure: No financial disclosure was declared by the authors.

Introduction

Hypertension is one of the most important health problems at the global level and it is a preventable and treatable disease. Despite the positive developments in the treatment, the number of hypertensive patients is rapidly increasing due to the increase in the elderly population; in addition to poor awareness of patients, poor compliance with treatment, and the increase in the incidence in low- and middle-income countries (1). In a study that investigated the change in the prevalence of hypertension in the last 40 years, it was found that the number of hypertensive individuals exceeded one billion people in the world by 2015 and increased by 90% (2). The incidence of hypertension is reported to be 29.9% in Turkey, 33% in the United States and 30-45% in Europe (1,3,4).

Hypertension is a chronic disease that can be controlled by medical treatment as well as lifestyle changes. Besides the compliance with the suggested treatment, lifestyle changes have an important place in the blood pressure control of individuals (5,6). In parallel with the increase in the prevalence of hypertension, there is an increasing interest in complementary and alternative therapies (CAM) in hypertensive individuals (5,7). It has been reported in the literature that the frequency of CAM use in patients with hypertension varies between 12.8% and 85.7% (8).

The complementary therapies include methods which are used by patients in addition to modern medicine, while alternative therapies include methods that replace modern medical practices and are not scientifically proven (9,10). Today, the most important reason for patients to approach CAM is the side effects that are believed to appear due to the drug treatment used and the doubt that the treatment will be inadequate. Moreover, the increase in chronic diseases in parallel with the increasing life expectancy, the frequency of CAM usage increases because of the difficulties experienced in reaching new treatment methods and the high cost of these treatments, and the dissatisfaction with the time allocated by the health care workers to patients (9,11-13).

While the use of complementary and alternative

therapies are increasing, it is reported that the patients do not receive counseling from health care professionals about the methods they use and their knowledge about CAM is limited to what they hear mostly from media and other individuals who are not health care workers (5,7,14). However, unconscious use of CAM methods can reduce the efficacy of drug therapy and may lead to undesirable drug interactions and side effects, as well as prolongation of the treatment process or organ dysfunctions (15). For this reason, it is important for health care workers to question the patients' CAM usage status, the methods they use and the reasons for their use in order to prevent complications that may develop in patients diagnosed with hypertension and to control blood pressure successfully.

The aim of this study is to investigate the opinions and practices of hypertensive patients on the use of complementary and alternative therapies and their attitudes towards holistic complementary and alternative medicine.

Methods

This descriptive and cross-sectional study was carried out in the cardiology and internal diseases outpatient clinics of a state hospital. The sample of the study consisted of 290 patients who were admitted to the outpatient clinics between January and July 2017, were diagnosed with hypertension at least 6 months ago and used antihypertensive drugs and volunteered to participate in the study.

The study was approved by Trakya University Medical Faculty Ethics Committee (Protocol no: 2016/279). Before the data were collected, the purpose of the study was explained to the patients and their informed consent was obtained. The patients were informed that the data would be kept confidential and would be used only for scientific purposes and that they could disclaim to fill out the questionnaire if they feel uncomfortable with the questions.

The data of the study were collected by using Patient Information Form which includes the socio-demographic characteristics of the patients, characteristics of the disease, and patients opinions and practices related to the use of complementary and

alternative therapy and attitudes towards Holistic Complementary and Alternative Medicine (HCAM) Scale.

Attitudes toward Holistic Complementary and Alternative Medicine (HCAM) Scale:

The scale was developed by Hyland et al. (16). The Turkish validity and reliability analysis of the scale was conducted by Erci (17). The scale consists of 11 items and it is in a six-point Likert scale type (strongly agree = 1, agree = 2, partly agree = 3, partly disagree = 4, disagree = 5, strongly disagree = 6). There are two sub-dimensions of the scale. The holistic health sub-dimension assesses the patient's perception of individuality in his/her care, and the complementary and alternative medicine sub-dimension evaluates the patient's attitudes towards the use of complementary and alternative therapy. The lowest possible score is 11, and the highest possible score is 66. The low score obtained from the scale indicates a positive attitude towards complementary and alternative medicine, and a high score indicates a negative attitude towards complementary and alternative medicine. In the study of Erci, cronbach's alpha value of the scale was found to be 0.72 (17). In this study, cronbach's alpha value was found to be 0.78.

The data were evaluated by using the IBM SPSS (Statistical Package for the Social Sciences for Windows 22.0) package program. In addition to the descriptive statistical methods, Mann-Whitney U test was used to compare quantitative continuous data between two independent groups that did not show normal distribution, and Kruskal-Wallis test was used to compare quantitative continuous data between more than two independent groups. Statistical significance was accepted as $p < 0.05$.

Results

The mean age of the patients ($n=290$) was 61.52 ± 11.19 years, and the ages ranged from 27 to 82, 63.1% were women, 83.4% were married and 74.8% were at primary education level or below, 53.1% had monthly income equal to the monthly outcome. It was determined that 45.5% of the patients had a diagnosis of hypertension 1 to 5 years ago, 64.5% used a single antihypertensive drug, 47.9% had additional chronic

disease/diseases, and 70% had a family history of hypertension (Table 1).

Table 1. Characteristics of patients ($n = 290$)

Characteristics	n	%
Age (Mean \pm SD=61,52 \pm 11,19)		
50 years old and below	48	16.6
51-60 years old	84	29.0
61-70 years old	97	33.4
70 years old and above	61	21.0
Gender		
Female	183	63.1
Male	107	36.9
Marital Status		
Married	242	83.4
Single	48	16.6
Education Level		
Primary School and below	217	74.8
High School and above	73	25.2
Monthly Income		
Income equals outcome	154	53.1
Income less than outcome	79	27.2
Income more than outcome	57	19.7
HT diagnosis		
1-5 years	132	45.5
6-10 years	86	29.7
11-15 years	27	9.3
16-20 years	33	11.4
20 years and above	12	4.1
Number of drugs used for HT treatment		
One	187	64.5
Two	96	33.1
Three	7	2.4
Additional chronic diseases		
Yes	139	47.9
No	151	52.1
HT family history		
Yes	203	70
No	87	30

HT: Hypertension

When we look at the opinions and practices of CAM using patients, it was determined that 80% of them know about CAM methods used in hypertension, and 59% of these patients heard these methods from other individuals around them who were not health care personnel. It was found that 64.8% of patients thought that CAM methods were beneficial, 56.9% used CAM, 43% used CAM twice a week, 27.3% thought that CAM was more effective than drugs.

Patients using CAM (n=165) mostly used lemon (80.6%) and garlic (41.2%), and 63% did not share the method they used with the health care workers. The

reasons for not sharing were the thinking that they do not need to (41.1%) and that the health care worker would react/get angry (39.4%) (Table 2).

Table 2. Opinions and practices of patients on CAM use (n = 290)

Opinions and practices	n	%
Knowledge of the CAM methods used in HT		
Yes	232	80
No	58	20
Where TAT methods are heard from*		
Media / Internet	97	33.4
People around	171	59.0
Health care personnel	30	10.3
No knowledge	58	20
Considering the CAM methods as useful		
Yes	188	64.8
No	40	13.8
I do not have any idea.	62	21.4
Actively using CAM in the treatment of HT		
Yes	165	56.9
No	125	43.1
CAM methods used* (n=165)**		
Lemon	133	80.6
Garlic	68	41.2
Parsley	22	13.3
Olive oil	13	7.9
Cherry stem	8	4.8
Quince leaf	8	4.8
Green tea	3	1.8
Corn tassel	3	1.8
Flaxseed oil	1	0.6
Frequency of weekly CAM use (n=165)**		
Once in a week	48	29.1
Twice a week	71	43
Three times a week	30	18.2
Four times a week and above	16	9.7
Reason for using CAM (n=165)**		
Balancing blood pressure	19	11.5
Friend recommendation	27	16.4
CAM is more effective than drugs	45	27.3
A cheaper method than drugs	16	9.7
Side effects are less than drugs	33	20
Supplementary to medical treatment	25	15.1
Sharing the CAM method used with the health care worker (n=165)**		
Yes	61	37.0
No	104	63.0
The reason for not sharing the CAM method used with the health care worker (n=104)***		
No need	49	47.1
The thought of reaction	41	39.4
No reason in mind	14	13.5

HT: Hypertension CAM: Complementary and Alternative Therapy. *More than one option is marked. **Calculated based on CAM method users. ***Calculated based on those who do not share with health care workers.

The HCAM total score was 23.05 ± 5.80 (min = 12, max = 42), the holistic health sub-dimension score was 7.36 ± 1.68 (min = 5, max = 13) and the CAM sub-dimension score was 15.69 ± 5.52 (min = 6, max = 34) (Table 3).

Table 3. The mean scores of HCAM Scale of the patients (n = 290)

Scale and Sub-dimensions	Number of items	Min-Max possible from the scale	Min-Max taken from the scale	Mean±SD
HCAM Total	11	11 – 66	12 - 42	23.05 ± 5.80
Holistic Health Sub-dimension	5	5 – 30	5 - 13	7.36 ± 1.68
CAM Sub-dimension	6	6 – 36	6 - 34	15.69 ± 5.52

HCAM: Holistic Complementary and Alternative Medicine Scale. CAM: Complementary and Alternative Medicine

Statistically significant difference was found between the age group of the patients and the mean HCAM total (p=0.028) and holistic health sub-dimension scores (p=0.034); between the education level and the mean CAM sub-dimension score (p=0.048); between the monthly income status and the mean HCAM total (p=0.002) and CAM sub-dimension scores (p=0.002). In addition, the mean HCAM total (p=0.038) and the mean holistic health sub-dimension scores (p=0.035) were found to differ in accordance with CAM usage (Table 4).

Table 4. Comparison of the patients' characteristics with their mean score on HCAM Scale

Patients' Characteristics		HCAM Mean±SD	CAM Sub-dimension Mean±SD	Holistic Health Sub-dimension Mean±SD
Age	50 years old and below ^a	25.92±7.36	17.90±6.91	8.02±1.89
	51-60 years old ^b	22.42±5.26	15.35±5.12	7.07±1.75
	61-70 years old ^c	22.35±5.25	15.02±4.99	7.33±1.53
	70 years old and above ^d	22.77±5.41	15.48±5.31	7.30±1.52
	X^2	9.113*	5.304*	8.652*
	<i>p</i>	0.028	0.151	0.034
		<i>a>b,c,d</i>	<i>a>b,c,d</i>	
Gender	Female	22.83±5.95	15.43±5.50	7.40±1.74
	Male	23.43±5.54	16.13±5.55	7.30±1.57
	<i>MWUz</i>	-1.074**	-1.159**	-0.287**
	<i>p</i>	0.283	0.246	0.774
Education Level	Primary School and Below	22.61±5.38	15.21±5.14	7.41±1.66
	High School and above	24.34±6.77	17.11±6.35	7.23±1.75
	<i>MWUz</i>	-1.401**	-1.975**	-1.213**
	<i>p</i>	0.161	0.048	0.225
Monthly Income	Income equals outcome ^a	22.75±5.43	15.38±4.95	7.37±1.77
	Income less than outcome ^b	21.81±5.62	14.49±5.43	7.32±1.49
	Income more than outcome ^c	25.56±6.33	18.16±6.37	7.40±1.71
	X^2	12.391*	12.688*	0.071*
	<i>p</i>	0.002	0.002	0.965
		<i>c>a,b</i>	<i>c>a,b</i>	
CAM usage	Yes	22.35±5.07	15.19 ±5.04	7.16±1.58
	No	23.97±6.55	16.34±6.05	7.63±1.78
	<i>MWUz</i>	-2.079**	-1.258**	-2.113**
	<i>p</i>	0.038	0.208	0.035

CAM: Complementary and alternative therapy. HCAM: Holistic Complementary and Alternative Medicine Scale

Discussion

Hypertension is a health problem that affect primarily the elderly population with increasing incidence and cause the death of millions of individuals every year due to the complications (1). Therefore, in addition to medical treatment, patients tend to use CAM methods that include different practices and ideas. In this study, it was found that most of the patients stated that they knew about the CAM methods used in hypertension. However, the source of information was mostly other individuals who were not health care workers. Similar results have been obtained in studies evaluating the use of CAM in hypertensive patients (7,14) and in different patient groups (18-20) in our country. This can make it more difficult to control the disease by preventing patients to get accurate information from the right sources, and causing patients to acquire unreliable information and to gain negative health behaviors.

In the study, it was found that more than half of the patients (64.8%) believed that CAM methods were beneficial and 56.9% of patients used CAM methods in the treatment of hypertension. All of the patients who used CAM were using herbal methods and used these methods twice a week (43.1%). In studies investigating the use of CAM in hypertensive patients in different countries, Ali-Shtayeh et al. (12) reported 85.7% in Palestine, Ibrahim et al. (21) reported 65.5% in Iraq, Shafiq et al. (22) reported 63.9% in India, Gohar et al. (23) reported 43.1% in the UK, Amira and Okubadejo (24) reported 39.1% in Nigeria. In studies investigating the use of CAM in hypertensive patients in Turkey, Toprak and Demir (25) reported 63.9%, Guven et al. (7) reported 52.7%, while Asilar and Gozum (26) reported 42.7%. Efe et al. (5) reported that 74.8% of the patients used herbal products as the CAM method, while Bahar et al. (14) reported as 51.3%. Adaptation of patients to treatment is very important in achieving blood pressure control and optimum blood pressure values of patients with hypertension (4). The fact that more than half of the patients in this study used CAM and they applied this method twice a week may be considered as an indicator of the lack of blood pressure

control and non-compliance to the treatment.

It was determined both in this study and in other studies that the herbal products used by hypertension patients were lemon and garlic (5,7,12,14,24). Rohner et al. (27) reported in a meta-analysis study examining the double-blind randomized controlled studies that garlic may be effective in reducing blood pressure in hypertensive individuals, but the evidence is not strong enough to produce a definite result, and that longer-term, well-planned, stronger studies are needed. It has been reported that garlic is effective on blood pressure without any serious side effects by inhibiting the angiotensin-converting enzyme and showing vasodilatory effect (28). Therefore, hypertension patients may tend to consume such non-pharmacological methods in order to balance their blood pressure. In studies investigating the blood pressure-lowering effect of lemon in hypertensive individuals, Reshef et al. (29) reported that lemon and vitamin C preparations may be effective in patients with mild hypertension, while Sari et al. (30) found that lemon was frequently used by hypertensive patients, however there was no evidence of a blood pressure lowering effect. It is stated that the lemon will not directly harm the patients with hypertension, but the patients may be harmed especially if they avoid using drugs thereby interfering with the medical treatment.

In the study, patients using CAM were found to use CAM because they thought they were more effective than drugs and that their side effects were less than drugs. Similarly, studies with hypertensive patients have shown that patients prefer using CAM thinking that the side effects of herbal products are less, they are more reliable, they relieve symptoms and because patients are not satisfied with medical treatment (11-13).

In the literature, it is stated that very few patients, such as one in ten people, consulted the physician and nurse about the CAM methods they used (31,32). In this study, it was determined that 63% of the patients did not share the CAM method with the health care workers, and the reason for not sharing was the opinion that they do not need to and that health

workers would react / get angry. Similar findings were found in other studies (7,22).

One of the most important factors affecting the use of CAM by patients is the communication problem between the patient and the health team members who are responsible for the patient's holistic care. It is reported that their lack of understanding of fear, anxiety and worries of patients, lack of openness and trust environment, lack of empathy, ineffective listening, and lack of guiding are some of the reasons that direct patients towards the use of CAM. In addition, it is stated that patients prefer to hide this situation from health care personnel because they believe that they will face a negative reaction if they report (33). In a study where Tovey and Broom (34) investigated the approach of health care workers towards CAM and the effects on patients found that they exhibited three distinct attitudes: some of them showing a distinctly negative attitude, some of them showing a supportive but still contradictory attitude, and some of them being utilitarian and accepting. Due to these different attitudes, it may be thought that patients using CAM may be reluctant to share the methods they use with health workers.

It was determined in the study that the mean HCAM total score was 23.05 ± 5.80 , the mean holistic health sub-dimension score was 7.36 ± 1.6 , and the mean CAM sub-dimension score was 15.69 ± 5.52 . According to the scores obtained from the scale, patients have positive attitudes towards holistic complementary and alternative medicine and use, and it can be said that the perception of individuality in their care is very high. In his study, Erci (17) stated that healthy individuals had more negative attitudes towards using CAM than patients. Ibrahim et al. (21) reported in a study with hypertensive patients in Iraq that patients who reported using CAM had more positive attitudes towards CAM than those who did not use them. Using the same scale in Turkey, the attitudes of gynecological cancer patients towards CAM was evaluated and the patients were found to have positive

attitudes (20). When the literature is examined, it is seen that the studies where attitudes towards CAM are investigated are mostly performed with university students, health care professionals or healthy individuals (17,35,36) and the studies evaluating the attitudes of patients are limited (20-21).

When the mean HCAM and the sub-dimension scores of patients were examined, it was found that patients who acknowledge using CAM had more positive attitudes towards HCAM than the patients who did not, whereas, patients at 50 years of age and below had more negative attitudes towards HCAM compared to the patients who were 50 years and above, and patients with higher income were found to have more negative attitudes towards HCAM than patients with lower income. It was determined that patients with primary and lower education level had more positive attitudes towards CAM sub-dimension than patients with high school or higher education level. It has been reported in studies that the positive attitude towards CAM increased with increasing age, and the frequency of use of CAM is higher in patients with low levels of education and income, and the attitudes of CAM-using hypertensive patients and patients with income less than outcome, thoughts about CAM are more positive (7,17, 19,22).

Conclusion

The results of this study showed that patients had positive attitudes towards holistic complementary and alternative medicine, patients used CAM methods in addition to medical treatment but did not share the methods they used with health care workers. The fact that hypertensive patients refer to complementary and alternative therapies may indicate an incompliance to treatment or the methods used may cause undesirable side effects in patients. For this reason, in order to achieve complete blood pressure control, it is necessary for health care workers to question the CAM use of patients and their attitudes towards CAM, to ensure patient participation in organizing the treatment plan and to give importance to patient education.

References

1. Kılıçkap M, Barçın C, Göksülük H, Karaaslan D, Özer N, Kayıkçioğlu M, et al. Data on prevalence of hypertension and blood pressure in Turkey: systematic review, meta-analysis and meta-regression of epidemiological studies on cardiovascular risk factors. *Turk Kardiyol Dern Ars* 2018;46(7):525-45.
2. NCD Risk Factor Collaboration. Worldwide trends in blood pressure from 1975 to 2015: a pooled analysis of 1479 population-based measurement studies with 19.1 million participants. *Lancet* 2017;389(10064):37-55.
3. Santulli G. Epidemiology of cardiovascular disease in the 21st century: updated numbers and updated facts. *Journal of Cardiovascular Disease* 2013;1(1):1-2.
4. Williams B, Mancia G, Spiering W, Agabiti Rosei E, Azizi M, Burnier M, et al. 2018 ESC/ESH guidelines for the management of arterial hypertension. *Eur Heart J* 2018;39(33):3021-104.
5. Efe D, Akça NK, Kiper S, Aydın G, Gümüş K. Hipertansiyonu olan bireylerin kan basıncını düşürmeye yönelik kullandıkları destekleyici yöntemler. *Spatula DD* 2012;2(4):207-12.
6. Altun B, Arıcı M, Nergizoğlu G, Dericci U, Karatan O, Turgan C, et al. Prevalence, awareness, treatment and control of hypertension in Turkey (the PatenT study) in 2003. *Journal of Hypertension* 2005;23(10):1817-23.
7. Güven ŞD, Muz G, Ertürk NE, Özcan A. Hipertansiyonlu bireylerde tamamlayıcı ve alternatif tedavi kullanma durumu. *Balıkesir Sağlık Bilimleri Dergisi* 2013;2(3):160-6.
8. Kes D, Gökdoğan F, Tuna D. Hipertansiyonu olan hastaların tamamlayıcı ve alternatif tedavi kullanımı: literatür taraması. *Kardiyovasküler Hemşirelik Dergisi* 2016;7(12):40-55.
9. Khorshid L, Yapucu Ü. Tamamlayıcı tedavilerde hemşirenin rolü. *Atatürk Üniversitesi Hemşirelik Yüksekokulu Dergisi* 2005;8(2):124-30.
10. Edwards QT, Colquist S, Maradiegue A. What's cooking with garlic: is this complementary and alternative medicine for hypertension? *J Am Acad Nurse Pract* 2005;17(9):381-5.
11. Tan M, Uzun Ö, Akçay F. Trends in complementary and alternative medicine in Eastern Turkey. *J Altern Complement Med* 2004;10(5):861-5.
12. Ali-Shtayeh MS, Jamous RM, Salameh NM. Complementary and alternative medicine (CAM) use among hypertensive patients in Palestine. *Complement Ther Clin Pract* 2013;19(4):256-63.
13. Lee K, Mokhtar HH, Krauss SE, Ong BK. Hypertensive patients preferences for complementary and alternative medicine and the influence of these preferences on the adherence to prescribed medication. *Complement Ther Clin Pract* 2014;20(2):99-105.
14. Bahar Z, Kızılcı S, Beşer A, Besen DB, Gördes N, Ersin F, et al. Herbal therapies used by hypertensive patients in Turkey. *Afr J Tradit Complement Altern Med* 2013;10(2):292-8.
15. Prasad K, Sharma V, Lackore K, Jenkins S, Prasad A, Sood A. Use of complementary therapies in cardiovascular disease. *Am J Cardiol* 2013;111(3):339-45.
16. Hyland ME, Lewith GT, Westoby C. Developing a measure of attitudes: the holistic complementary and alternative medicine questionnaire. *Complement Ther Med* 2003;11(1):33-8.
17. Erci B. Attitudes towards holistic complementary and

- alternative medicine: a sample of healthy people in Turkey. *J Clin Nurs* 2007;16(4):761-8.
18. Kav S, Hanoğlu Z, Algier L. Türkiye'de kanserli hastalarda tamamlayıcı ve alternatif tedavi yöntemlerinin kullanımı: literatür taraması. *Uluslararası Hematoloji-Onkoloji Dergisi* 2008;18(1):32-8.
19. İpek E, Güray Y, Demirkan B, Güray Ü, Kafes H, Başyigit F. Kardiyoloji polikliniğine başvuran hastalarda bitkisel kökenli alternatif tedavilerin ve tamamlayıcı besin ürünlerinin tüketim prevalansı. *Türk Kardiyol Dern Arş* 2013;41(3):218-24.
20. Öztürk R, Şatır DG, Sevil Ü. Jinekolojik kanserli hastaların tamamlayıcı ve alternatif tedavi kullanım durumları ve tutumlarının incelenmesi. *Gaziantep Med J* 2016;22(3):141-7.
21. Ibrahim IR, Hassali MA, Saleem F, Al Tukmagi HF, Dawood OT. Patients' attitudes towards complementary and alternative medicine: a cross-sectional study among hypertensive patients in Baghdad, Iraq. *J Complement Med Alt Healthcare* 2018;7(3):1-8.
22. Shafiq N, Gupta M, Kumari S, Pandhi P. Prevalence and pattern of use of complementary and alternative medicine (CAM) in hypertensive patients of a tertiary care center in India. *Int J Clin Pharmacol Ther* 2003;41(7):294-8.
23. Gohar F, Greenfield SM, Beevers DG, Lip HY, Jolly K. Self-care and adherence to medication: a survey in the hypertension outpatient clinic. *BMC Complement Altern Med* 2008;8(4):1-9.
24. Amira OC, Okubadejo NU. Frequency of complementary and alternative medicine utilization in hypertensive patients attending an urban tertiary care centre in Nigeria. *BMC Complement Altern Med* 2007;7(30):1-5.
25. Toprak D, Demir S. Treatment choices of hypertensive patients in Turkey. *Behav Med* 2007;33(1):5-10.
26. Aşilar RH, Gözüm S. Hipertansif bireylerin tamamlayıcı sağlık yaklaşımı kullanımları ve bunun antihipertansif ilaç tedavi uyumuna etkisi. *TJFMPC* 2017;11(4):235-44.
27. Rohner A, Ried K, Sobenin IA, Bucher HC, Nordmann AJ. A systematic review and metaanalysis on the effects of garlic preparations on blood pressure in individuals with hypertension. *Am J Hypertens* 2014;28(3):414-23.
28. Shouk R, Abdou A, Shetty K, Sarkar D, Eid AH. Mechanisms underlying the antihypertensive effects of garlic bioactives. *Nutr Res* 2014;34(2):106-15.
29. Reshef N, Hayari Y, Goren C, Boaz M, Madar Z, Knobler H. Antihypertensive effect of sweetie fruit in patients with stage I hypertension. *Am J Hypertens* 2005;18(10):1360-3.
30. Sarı A, Selim N, Dilek M, Aydoğdu T, Adıbelli Z, Büyükkaya P, et al. Effect of lemon juice on blood pressure. *J Exp Clin Med* 2012;29:38-41.
31. Frass M, Strassl RP, Friehs H, Müllner M, Kundi M, Kaye AD. Use and acceptance of complementary and alternative medicine among the general population and medical personnel: a systematic review. *The Ochsner Journal* 2012;12(1):45-56.
32. Tas F, Üstüner Z, Can G, Eralp Y, Camlica H, Başaran M, et al. The prevalence and determinants of the use of complementary and alternative medicine in adult Turkish cancer patients. *Acta Oncol* 2005;44(2):161-7.
33. Tasaki K, Maskarinec G, Shumay DM, Tatsumura Y, Kakai H. Communication between physicians and cancer patients about complementary and alternative medicine: exploring patients' perspectives. *Psychooncology*

- 2002;11(3):212-20.
34. Tovey P, Broom A. Oncologists and specialist cancer nurses approaches to complementary and alternative medicine and their impact on patient action. *Soc Sci Med* 2007;64(12):2550-64.
35. Aktaş B. Hemşirelik öğrencilerinin bütüncül tamamlayıcı ve alternatif tıbbı karşı tutumları. *JAREN* 2017;3(2):55-9.
36. McFadden KL, Hernandez TD, Ito TA. Attitudes toward complementary and alternative medicine influence its use. *Explore (NY)* 2010;6(6):380-8.