

The Knowledge and Attitudes of The Non-Health Worker Citizens and Physicians About Traditional and Complementary Medicine: A Cross-Sectional Study

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ABSTRACT

Aim: Healthcare professionals will set an example to society with their behaviors about Traditional and Complementary Medicine usage. We aimed to investigate and compare the knowledge and attitudes of society and physicians about Traditional and Complementary Medicine to create an infrastructure for medical training.

Methods: In this cross-sectional descriptive study "Turkish Version of Complementary, Alternative and Conventional Medicine Attitude Scale" was used for data collection.

Results: A total of 392 physicians and 438 citizens participated in the study. Among all participants, 36.9% had used a Traditional and Complementary Medicine method before and the most used method was phytotherapy. There was a significant difference between groups in terms of the level of knowledge. Surprisingly no significant difference was found between physicians and the public in the "Dissatisfaction with Modern Medicine" subgroup.

Conclusion: Although there were differences in the level of knowledge between the public and physicians, it was seen that the behavioral patterns were similar to each other. This situation suggests that physicians are also influenced by the society they live in, rather than scientific data, in their decisions about Traditional and Complementary Medicine. Being as a role model to the public, physicians are responsible for providing evidence-based answers to questions about Traditional and Complementary Medicine and should receive adequate training about methods.

Keywords: complementary medicine, therapeutic use, evidence-based practice, knowledge, physicians

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Introduction

According to the World Health Organization (WHO), traditional and complementary medicine (CAM) is the set of knowledge, skills, and practices in addition to protecting from physical and mental diseases, diagnosing, improving, or treating them. CAM is also used in maintaining good health; based on theories, beliefs, and experiences specific to different cultures which can or cannot be explained (1). Traditional medicine practices include traditional and ethnic treatments on human health and diseases which accepts the human as a biopsychosocial being (2).

Again, according to WHO, the terms "complementary medicine" or "alternative medicine" is a wide set of healthcare services that are not part of that country's tradition or conventional medicine and are not fully integrated into the dominant health system.

Data and studies on the awareness, use, and benefit of CAM methods are limited. People have an uncontrolled interest in traditional and complementary therapies, and unskilled people offer these treatments as an alternative to modern medicine. Many negative side effects, such as injury, can occur as a result of practices that are not based on evidence. To prevent these legal regulations have been made in many countries regarding the training and authorization of the people who will apply CAM, the characteristics of the health institutions that will apply, and which methods can be applied in which diseases (3).

Today, many people prefer complementary therapies in addition to modern medicine. The tendency of WHO member countries, especially the European Union countries, to evidence-based traditional medicine has increased and it is observed that this has started to be integrated into the health system. WHO recommends that member countries develop strategies to ensure safer use in this area (4).

Patients who used these methods uncontrollably thought that "they are not harmful because they are natural", not informing their physicians about their use of these methods. Physicians do not have enough

information on these products may cause the failure of the current conventional treatment or may cause life-threatening situations (5). In recent studies, it was stated that approximately one hundred thousand people died annually as a result of phytotherapy application (6).

In our study, based on the assumption that healthcare professionals will set a role model to society with their knowledge, attitudes, and behaviors about CAM usage, we aimed to investigate and compare the knowledge level, attitudes, and usage of the society and physicians about CAM.

Methods

The study was a cross-sectional study conducted between July and December 2018 after ethical approval from Ankara Diskapi Training and Research Hospital Ethics Committee.

According to TURKSTAT 2017 data, 16935 physicians worked in Ankara and the city population was 5.445.026 in the same period, which constituted the research universe. The sample of our study was planned to consist of 376 physicians and 385 non-healthcare worker citizens (NHWC) with a 95% confidence interval and 5% margin of error for both groups.

In sample selection, first, 10 districts in Ankara were determined by a simple random selection method. Afterward, among the hospitals, health institutions, and family health centers that were selected by random sampling method in these districts, a maximum of 20 physicians from each institution was interviewed (Physician group). During the interviews with the physicians, a maximum of 20 randomly selected NHWC who applied to the health institution were also interviewed (NHWC group). All interviews were conducted after informed consent was obtained.

People with psychiatric or neurological diseases, those under 18 years of age, and non-physician health personnel were excluded from the study.

A questionnaire form consisted of 25 questions developed by the researchers under the current literature to evaluate the demographic data of the participants and their knowledge on CAM and the 27-

questions "Turkish Version of Complementary, Alternative and Conventional Medicine (CAM) Attitude Scale" were used as data collection tools. The Turkish validity and reliability study of the CAM Attitude Scale was conducted by Elif Köse, Hasan Çetin Ekerbiçer, and Ünal Erkorkmaz in 2018 (7). CAM Attitude Scale examines attitudes towards CAM in 3 sub-dimensions. These are "Intellectual Perspective on Complementary Medicine", "Dissatisfaction with Modern Medicine" and "Holistic View to Health" sub-dimensions.

The scale items consist of 22 positive and 5 negative statements. In the scoring made with the 7-point Likert type method, the score obtained from each question is recorded according to their subgroups. Items consisting of negative statements are scored inversely. The scale does not have a cut-off value, and the higher the score is concluded the more positive attitudes towards traditional and complementary medicine. In our study, 3 and lower points were

accepted as a negative attitude, 4 and above points as a positive attitude. When evaluating the data obtained in the study, the IBM SPSS ver. 21 program was used for statistical analysis. For the examination of sociodemographic data, descriptive statistical methods (mean, median, standard deviation, percentage) was used. When examining the differences between groups, as our data did not meet the parametric test assumptions, a chi-square test was used. Calculated p-value <0.05 considered as significant.

Results

A total of 830 individuals, 392 physicians, and 438 NHWC, aged between 18 and 69, participated in the study. The average age of the participants was 35.7±10.2 (physicians 35.0±9.3; public 36.3±10.9). There is no significant difference between the study groups ($t=-0.759$ $p=0.079$). The distribution of some socio-demographic characteristics of the participants according to the study groups is given in Table 1.

Table 1. The distribution of some socio-demographic characteristics of the participants according to the study groups (n=830)

		Physicians n (%)	NHWC n (%)	Total n (%)	P*
Gender	Female	240 (46.9)	272 (53.1)	512 (61.7)	0.796
	Male	152 (47.8)	166(52.2)	318 (38.3)	
Income status	Can save money	191 (48.7)	129 (29.5)	320 (38.6)	0.000
	Can't save money	185 (47.2)	207 (47.3)	392 (47.2)	
	Can live with support	16 (4.1)	102 (23.3)	118 (14.2)	
The longest-lived place in the last 10 years	City center	379 (96.7)	387 (88.4)	766 (92.3)	0.000
	County / town	12 (3.1)	41(9.4)	53 (6.4)	
	Village	1 (0.3)	10 (2.3)	11 (1.3)	
... CAM to someone else before	Recommend	117 (29.8)	155 (35.4)	272 (32.8)	0.103
	Did not recommend	275 (70.2)	283(64.6)	558 (67.2)	
...CAM before	Used	130 (33.2)	176 (40.2)	306 (36.9)	0.036
	Did not use	262 (66.8)	262 (59.8)	524 (63.1)	

*chi-square test

Among all participants, 36.9% (n=306) had used a CAM method at least once before. This rate was 34.9% in the physician group (n=130) and 41.8% in the NHCW group (n=176). The difference was statistically significant on the part of the NHCW group ($p=0.036$). The distribution of the characteristics of CAM use of the participants who have used the CAM method before, according to the study groups is given

in Table 2.

The distribution of the answers given by the study groups to the information questions about CAM is given in Table 3. There was a statistically significant difference between the physicians' group and the NHWC group in all questions in terms of their level of knowledge ($p<0,001$ for all questions).

Table 2. Distribution of CAM usage characteristics of the participants who have used any method before (n=306)

		Physicians n (%)	NHWC n (%)	Total n (%)	P*
Gender	Female	90 (69.2)	108 (61.4)	198 (64.7)	0.155
	Male	40 (30.8)	68 (38.6)	108 (35.3)	
Income status	Can save money	63 (48.5)	54 (30.7)	117 (38.2)	0.000
	Can't save money	60 (46.2)	87 (49.4)	147 (48.0)	
	Can live with support	7 (5.4)	35 (19.9)	42 (13.7)	
The longest-lived place in the last 10 years	City center	124 (95.4)	157 (89.2)	281 (91.8)	0.146
	County / town	5 (3.8)	15 (8.5)	20 (6.5)	
	Village	1 (0.8)	4 (2.3)	5 (1.6)	
CAM method used (more than option can mark in this question)	Reflexology	41 (10.5)	62 (14.2)	103 (12.4)	0.099
	Ozone Therapy	33 (8.4)	22 (5)	55 (6.6)	0.003
	Mesotherapy	20 (5.1)	13 (3)	33 (4.0)	0.013
	Musical Therapy	29 (7.4)	25 (5.7)	54 (6.5)	0.028
	Acupuncture	75 (19.1)	51 (11.6)	126 (15.2)	0.000
	Apitherapy	27 (6.9)	37 (8.4)	64 (7.7)	0.129
	Phytotherapy	72 (18.4)	124 (28.3)	196 (23.6)	0.030
	Hypnosis	16 (4.1)	7 (1.6)	23 (2.8)	0.040
	Leech Application	16 (4.1)	33 (7.5)	49 (5.9)	0.039
	Cupping therapy	10 (2.6)	21 (4.8)	31 (3.7)	0.068
... with the method used	Satisfied	121 (93.1)	158 (89.8)	279 (91.2)	0.314
	Unsatisfied	9 (7.9)	18 (10.2)	27 (8.8)	
... CAM again	I use	119 (91.5)	154 (87.5)	273 (88.8)	0.260
	I do not use	11 (9.5)	22 (12.5)	33 (11.2)	
Most effective factor in deciding the use of CAM	Social environment	28 (21.5)	69 (39.2)	97 (31.7)	0.009
	Family	19 (14.6)	28 (15.9)	47 (15.4)	
	Media	12 (9.2)	12 (6.8)	24 (7.9)	
	Internet	18 (13.8)	22 (12.5)	40 (13.1)	
	Physician	53 (40.8)	45 (25.6)	98 (32.0)	

*chi-square test

In our study, the score obtained from the answers to the questions of the CAM Attitude Scale was considered as 3 and below as negative attitude and 4 and above as positive attitude. The distribution of positive and negative attitude evaluations according to the independent variables is given in Table 4. According to the table, in terms of the total score, the variables of the study group and the place where they mostly lived in the last 10 years created a significant difference in attitude towards positive attitude ($p < 0.001$ and $p = 0.009$ respectively).

When the subgroups were examined, it was seen that only the study group variables made a significant difference in the "Complementary Medical Intellectual Perspective" subgroup ($p < 0.001$).

A striking finding of our study was that no

significant difference was found between physicians and the public in the "Dissatisfaction with Modern Medicine" subgroup ($p = 0.760$).

Discussion

It is observed that CAM applications are becoming more diversified and their usage becomes more popular day by day. Among the main reasons for this increase is the belief that natural products are better and safer. On the other hand, the practices within this scope being open to abuse and not being subject to standard rules and methods have brought some risks in terms of public health (8). In the literature review, although studies are investigating the prevalence of CAM use in many special groups such as cancer patients, diabetic patients, etc., we could not find any study comparing the use of CAM by physicians and

the public. It was aimed to create a basis for the data on this subject by comparing the knowledge and

attitudes of the people and physicians living in Ankara-Turkey.

Table 3. Distribution of the answers given by the participants to the information questions about CAM according to the study groups and the correct/incorrect answers (n=830)

Question (Type of CAM it queries)	Study Group	Correct Responders	Incorrect Responders	Those who do not know	P*
		n (%)	n (%)	n (%)	
Herbal products can be used to support medical treatment (Phytotherapy)	Physician	288 (73.5)	75 (19.1)	29 (7.4)	<0.001
	NHWC	363 (82.9)	29 (6.6)	46 (10.5)	
	Total	651 (78.4)	104 (12.5)	75 (9.0)	
The method of manual applications on the musculoskeletal system can be used in cases such as low back pain (Osteopathy)	Physician	309 (78.8)	46 (11.7)	37 (9.4)	<0.001
	NHWC	235 (53.7)	80 (18.3)	123 (28.1)	
	Total	544 (28.3)	126 (9.6)	160 (9.3)	
Ozone application has no place in burn treatment (Ozone therapy)	Physician	143 (36.5)	41 (10.5)	208 (53.1)	<0.001
	NHWC	81 (18.5)	64 (14.6)	293 (66.9)	
	Total	224 (27.0)	105 (12.7)	501 (60.4)	
Acupuncture treatment is a method that stimulates certain parts of the body by inserting needles (Acupuncture)	Physician	381 (97.2)	4 (1.0)	7 (1.8)	<0.001
	NHWC	374 (85.4)	7 (1.6)	57 (13.0)	
	Total	755 (91.0)	11 (1.3)	64 (7.7)	
Massage application is not used to relieve pain (Massage)	Physician	359 (91.6)	11 (2.8)	22 (5.6)	<0.001
	NHWC	281 (64.2)	89 (20.3)	68 (15.5)	
	Total	640 (77.1)	100 (12.0)	90 (10.8)	
The method of applying pressure to certain points of the foot has no place in complementary and alternative therapies (Reflexology)	Physician	266 (67.9)	38 (9.7)	88 (22.4)	<0.001
	NHWC	208 (47.5)	42 (9.6)	188 (42.9)	
	Total	474 (57.1)	80 (9.6)	276 (33.3)	
The cupping method, which increases blood circulation, can be applied directly on the varicose veins (Cupping)	Physician	229 (58.4)	14 (3.6)	149 (38.0)	<0.001
	NHWC	140 (32.0)	30 (6.8)	268 (61.2)	
	Total	369 (44.5)	44 (5.3)	417 (50.2)	
Bee products can be used under one-year-old children (Apitherapy)	Physician	336 (85.7)	6 (1.5)	50 (12.8)	<0.001
	NHWC	247 (56.4)	41 (9.4)	150 (34.2)	
	Total	583 (70.2)	47 (5.7)	200 (24.1)	
Wound treatment can be done using a type of fly larva (Maggot Therapy)	Physician	109 (27.8)	105 (26.8)	178 (45.4)	<0.001
	NHWC	51 (11.6)	87 (19.9)	300 (68.5)	
	Total	160 (19.3)	192 (23.1)	478 (57.6)	
Leech therapy can be applied to all parts of the body (Leech therapy)	Physician	227 (57.9)	98 (25.0)	67 (17.1)	<0.001
	NHWC	162 (37.0)	83 (19.0)	193 (44.0)	
	Total	389 (46.9)	181 (21.8)	260 (31.3)	

*chi-square test

CAM usage rate among those who participated in our study was found as 36.9%. When we examine the studies conducted in the world and our country, prevalence studies of the use of CAM by the general population give results ranging from 0.3% to 86% for the use of any type of CAM at any time (9). In Turkey, CAM usage rate in a study conducted with 1100 patients who apply to primary health care, found 65.8%, while in another study with the age of 60 and older patients living in rural areas increased to 98.3% (10).

According to our findings, 33.2% of the physicians had used CAM at least once. In a study conducted in India, it was reported that 58% of physicians used CAM (11). In another study conducted in Trinidad and Tobago, the prevalence of CAM use was reported as 92.4% for nurses, 64.9% for physicians, 83.3% for pharmacists, and 77.1% for other healthcare workers (12). We thought that these different rates of CAM usage may have occurred depending on the culture of the society in which physicians live.

Table 4: Distribution of the sub-dimensions and total scores of the CAM Attitude Scale of the participants by independent variables (n=830)

		Intellectual Perspective on Complementary Medicine			Dissatisfaction with Modern Medicine			Holistic Perspective on Health			Total		
		Positive Attitude n (%)	Negative Attitude n (%)	P*	Positive Attitude n (%)	Negative Attitude n (%)	P*	Positive Attitude n (%)	Negative Attitude n (%)	P*	Positive Attitude n (%)	Negative Attitude n (%)	P*
Study Group	Physician	108 (27.6)	284 (72.4)	0.000	275 (70.2)	117 (29.8)	0.760	368 (93.9)	24 (6.1)	0.247	146 (37.2)	246 (62.8)	0.000
	NHWC	256 (58.4)	182 (41.6)		303 (69.2)	135 (30.8)		419 (95.7)	19 (4.3)		269 (61.4)	169 (38.6)	
Gender	Female	212 (41.4)	300 (58.6)	0.071	352 (68.8)	160 (31.3)	0.480	490 (95.7)	22 (4.3)	0.145	252 (49.2)	260 (50.8)	0.617
	Male	152 (47.8)	166 (52.2)		226 (71.1)	92 (28.9)		297 (93.4)	21 (6.6)		163 (51.3)	155 (48.7)	
Income status	Can save money	132 (41.3)	188 (58.8)	0.070	230 (71.9)	90 (28.1)	0.509	298 (93.1)	22 (6.9)	0.148	152 (47.5)	168 (52.5)	0.227
	Can't save money	169 (43.1)	223 (56.9)		269 (68.6)	123 (31.4)		374 (95.4)	18 (4.6)		196 (50.0)	196 (50.0)	
	Can live with support	63 (53.4)	55 (46.6)		79 (66.9)	39 (33.1)		115 (97.5)	3 (2.5)		67 (56.8)	51 (43.2)	
The longest-lived place in the last 10 years	Village	8 (7.7)	3 (27.3)	0.106	10 (90.9)	1 (9.1)	0.184	11 (100.)	0 (0.0)	0.650	10 (90.9)	1 (9.1)	0.009
	County / town	26 (49.1)	27 (50.9)		40 (75.5)	13 (24.5)		51 (96.2)	2 (3.8)		31 (58.5)	22 (41.5)	
	City center	330 (43.1)	436 (56.9)		528 (68.9)	238 (31.1)		725 (94.6)	41 (5.4)		374 (48.8)	392 (51.2)	

*chi-square test

In our study, 40.2% of the population had used CAM at least once before. There was a significant difference between the prevalence of CAM use among the physicians' group and the NHWC group. In the literature review, we could not find a study comparing the use of CAM by physicians and the public. However, we thought that this difference between the CAM usage rates of the public and physicians might be due to the content of the education physicians received in medical schools.

It has been suggested that in China, India, and some African countries low-income levels have a significant impact on increased CAM use, due to the difficulty in accessing healthcare services (13).

In a study conducted in our country in 2010, no significant difference was found between the income level of the participants and the use of CAM, but a significant difference was found between the place of residence and education (14). In the study conducted by Şimşek et al. (13), the effect of education and income level on CAM use could not be revealed. In our study, no significant difference was found between CAM use, gender, and place of residence. We thought

that the difference we found between income level and CAM usage might be because one of our groups consisted of physicians with a higher income than the population average. We did not compare the effect of education on the prevalence of CAM use among the groups, since one of our groups consists entirely of physicians with a high education level.

When the participants were asked which CAM methods they used before, it was found that the physicians mostly preferred acupuncture (19.1%) and phytotherapy (18.4%), and the people preferred phytotherapy (28.3%) and reflexology (14.2%) methods. The first 2 methods preferred for the whole study group were phytotherapy (23.6%) and acupuncture (15.2%). Although the diversity of CAM use varies according to the countries where the studies were conducted, it is seen that the use of phytotherapy and acupuncture is in the first two places regardless of sociocultural differences (15-18). Our findings were similar to the other conducted studies.

When the most effective factors in deciding the use of CAM were examined, it was determined that the NHWC group mostly used the CAM method based on

the advice they received from their environment and physicians' group from other physicians. Considering the whole group, it was seen that the environmental impact was dominant in the use of CAM. This finding was consistent with studies reporting that environmental factors are effective in the use of CAM, especially in the Asian population (19).

In the study of Milden et al. (20), where they examined the knowledge levels of physicians about CAM in the USA, 61% of the physicians stated that they did not have enough information to apply to their patients. In the study conducted by Bjersa et al. (21) in Sweden, 95.7% of the physicians stated that they had no or low level of knowledge about CAM. In our study, the correct answers given to 10 questions we asked about CAM methods were examined and a significant difference was found between the 2 groups in all questions. While the direction of significance is in favor of the NHWC group in the phytotherapy question, all other questions are in favor of the physicians' group. The question that both groups answered least correctly was the question of wound healing by using some kind of fly larva (Maggot Therapy).

In the evaluation of CAM Attitude Scale sub-dimensions and total scores of the participants in the study, a significant difference was found in the NHWC group's aspect in the subtitle Complementary Medical Intellectual Outlook.

When evaluated in terms of total scores, positive attitude was found to be significantly higher in the NHWC group and those who mostly lived in a village in the last 10 years. It is thought that this difference

may be due to the difference in access to health services (13).

A striking finding of our study is that no significant difference was found between physicians and the public in the "Dissatisfaction with Modern Medicine" subgroup. More detailed research should be done on the reason for this difference, which is not expected from the physicians who graduated after receiving a modern medicine-based education from medical faculties.

Limitations of the study: Since our study was questionnaire-based, it was open to limitations such as incorrect and incomplete answers, which were the general limitations of this type of research.

Since the CAM knowledge questions in the questionnaire consist of questions prepared by the researchers, it should not be expected to fully determine the level of knowledge about CAM and the research results should be evaluated accordingly.

Conclusion

Although there were differences in the level of knowledge between the public and physicians, it was seen that the behavioral patterns were similar to each other. This situation suggests that physicians are also influenced by the society they live in, rather than scientific data, in their decisions about Traditional and Complementary Medicine. Being as a role model to the public, physicians are responsible for providing evidence-based answers to questions about Traditional and Complementary Medicine and should receive adequate training about methods.

References

1. World Health Organization [Internet]. General guideline for methodologies on research and evaluation of traditional medicine [cited 2020 Dec 15]. Available from: <https://apps.who.int/iris/handle/10665/66783>
2. Ben-Arye E, Ziv M, Frenkel M, Lavi I, Rosenman D. Complementary medicine and psoriasis: linking the patient's outlook with evidence-based medicine. *Dermatology* 2003;207(3):302-7. doi:10.1159/000073094.
3. Turkish Ministry of Health. Traditional and complementary medicine practices regulation. Official Gazette of the Republic of Turkey 2014 Oct 27. Vol: 29158 [cited Dec 16]. Available from: <https://www.resmigazete.gov.tr/eskiler/2014/10/20141027-3.htm>
4. World Health Organization. Introduction. In: WHO traditional medicine strategy: 2014-2023. Geneva: World Health Organization, 2013:14-5.

5. Şahin S. An overview of traditional, complementary, alternative medicine practices. *Turkish Journal of Family Practice* 2017;21(4):159-62. doi:10.15511/tahd.17.00459.
6. Tütüncü S. An overview of traditional, alternative and complementary medicine practices. In: Tütüncü S, Etiler N (Eds.) *There is no alternative to medicine! Traditional alternative and complementary medicine practices*. Ankara: Turkish Medical Association, 2017:11-53.
7. Köse E, Ekerbiçer H, Erkorkmaz Ü. Complementary, alternative and conventional medicine attitude scale: Turkish validity reliability study. *Sakarya Medical Journal* 2018;8(4):726-36. doi:10.31832/smj.478148.
8. Kocabaş E, Eke E, Demir M. Evaluation of individuals' attitudes towards traditional and alternative methods in healthcare use. *Bolu Abant İzzet Baysal Üniversitesi Sosyal Bilimler Enstitüsü Dergisi* 2019;19(1):63-4. doi:10.11616/basbed.v19i43676.486383.
9. Guillauda A, Darboisa N, Alleneta B, Pinsault N. Predictive factors of complementary and alternative medicine use in the general population in Europe: A systematic review. *Complementary Therapies in Medicine* 2019;42:347–54. doi:10.1016/j.ctim.2018.12.014.
10. Ünal M, Dağdeviren HN. Traditional and complementary medicine methods. *Euras J Fam Med* 2019;8(1):1-9. doi:10.33880/ejfm.2019080101.
11. Roy V, Gupta M, Ghosh RK. Perception, attitude and usage of complementary and alternative medicine among doctors and patients in a tertiary care hospital in India. *Indian J Pharmacol* 2015;47:137-42. doi:10.4103/0253-7613.153418.
12. Bahall M, Legall G. Knowledge, attitudes, and practices among health care providers regarding complementary and alternative medicine in Trinidad and Tobago. *BMC Complementary and Alternative Medicine* 2017;17:144. doi:10.1186/s12906-017-1654-y.
13. Şimşek B, Aksoy DY, Basaran NC, Taş D, Albasan D, Kalaycı MZ. Mapping traditional and complementary medicine in Turkey. *European Journal of Integrative Medicine* 2017;15:68-72. doi:10.1016/j.eujim.2017.09.006.
14. Güven ŞD, Muz G, Ertürk NE, Özcan A. Complementary and alternative therapy use in individuals with hypertension. *Balıkesir Sağlık Bil Derg* 2013;2(3):160-6. doi:10.5505/bsbd.2013.02996.
15. Alrowais NA, Alyousefi NA. The prevalence extent of complementary and alternative medicine (CAM) use among Saudis. *Saudi Pharmaceutical Journal* 2017;25:306–18. doi:10.1016/j.jsps.2016.09.009.
16. Alarbash AA, Morait SA, Demyati EA. Knowledge, attitudes, and practices regarding complementary and alternative medicine among patients attending a family medicine clinic in Saudi Arabia: A cross-sectional study. *JMSCR* 2019;7(2):691-9. doi:10.18535/jmscr/v7i2.123.
17. James PB, Wardle J, Steel A, Adams J. Traditional, complementary and alternative medicine use in Sub-Saharan Africa: A systematic review. *BMJ Glob Health* 2018;3(5):e000895. doi:10.1136/bmjgh-2018-000895.
18. Samara AM, Barabra ER, Quzaih HN, Zyoud SH. Use and acceptance of complementary and alternative medicine among medical students: A cross sectional study from Palestine. *BMC Complementary and Alternative Medicine* 2019;19:78. doi:10.1186/s12906-019-2492-x.
19. Tangkiatkumjai M, Boardman H, Walker DM. Potential factors that influence usage of complementary and alternative medicine worldwide: a systematic review. *BMC Complement Med Ther* 2020;20:363. doi:10.1186/s12906-020-03157-2.
20. Milden SP, Stokols D. Physician's attitudes and practices regarding complementary and alternative medicine. *Behavioral Medicine* 2004;30:73-82. doi:10.3200/BMED.30.2.73-84.
21. Bjersa K, Stener Victorin E, Fagevik Olsén M. Knowledge about complementary, alternative and integrative medicine (CAM) among registered healthcare providers in Swedish surgical care: a national survey among university hospitals. *BMC Complement Altern Med* 2012;12:42. doi:10.1186/1472-6882-12-42.