ARAŞTIRMA MAKALESİ / *RESEARCH ARTICLE*

Use of Complementary and Alternative Medicine Methods Among Elderly People Living in Nursing Homes

Huzurevinde Kalan Yaşlılarda Tamamlayıcı ve Alternatif Tıp Yöntemlerini Kullanma Durumu

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ABSTRACT

Aim: *Complementary and alternative medicine (CAM) usage has increased among the elderly. To promote comprehensive quality care, health professionals should assess for CAM usage. This study was planned to determine the CAM usage among elderly living in nursing homes in Istanbul.*

Material and Method: *This study was made in two nursing homes in Istanbul between December 2012 and May 2013. The study sample consisted of 230 elderly.*

Results: *A percentage of 59.1 of elderly (n=136) used CAM. Herbs (55.2%) and non-herbal supplements (53.5%) were the most frequently used therapies. CAM usage rate was higher among elderly who graduated from secondary school, had chronic disorder, and used medicine regularly (p <0.05); 65.4% of them did not inform healthcare personnel.*

Conclusion: *CAM is used commonly by elderly living in nursing homes. Herbal (parsley, garlic and mint) and non-herbal supplements (honey, vitamin B, Vitamin C) were used commonly. Elderly who graduated from secondary school, had chronic disorders, and used medicines regularly preferred using CAM. Elderly generally do not inform healthcare personnel that they have used these methods.*

Key words: *complementary and alternative medicine; elderly; nursing homes*

ÖZET

Amaç: *Tamamlayıcı ve alternatif tıp (TAT) yöntemlerinin kullanımı yaşlılar arasında artmıştır. Bakım kalitesini yükseltmek için sağlık profesyonelleri TAT yöntemlerinin kullanımını değerlendirmelidir. Bu çalışma İstanbul'da iki huzurevinde kalan yaşlılarda TAT yöntemlerini kullanma durumunu saptamak amacıyla yapıldı.*

Materyal ve Metot: *Bu çalışma Aralık 2012 ve Mayıs 2013 tarihleri arasında İstanbul'da iki huzurevinde yapıldı. Çalışmanın örneklemini 230 yaşlı birey oluşturdu.*

Bulgular: *Yaşlıların %59,1'i TAT yöntemlerinden birini kullanıyordu. Bitkiler (%55,2) ve bitkisel olmayan destekler (%53,5) en çok kullanılan TAT yöntemleriydi. Ortaokul mezunu, kronik bir hastalığı olan ve düzenli tıbbi tedavi alan yaşlılar arasında TAT kullanım oranı yüksekti (p <0,05). Yaşlıların %65,4'ü TAT kullandığını sağlık personeline bilgi vermemişti.*

Sonuç: *Huzurevinde kalan yaşlılarda TAT kullanımı yaygındı. Bitkisel (maydanoz, sarımsak ve nane) ve bitkisel olmayan destekler (bal, B ve C vitamini) en yaygın kullanılan yöntemlerdir. Ortaokul mezunu, kronik bir hastalığı olan ve düzenli tıbbi tedavi alan yaşlılar TAT kullanımını tercih etmektedir. Yaşlılar genellikle bu yöntemleri kullandıklarını sağlık personeline söylememektedir.*

Anahtar kelimeler: *tamamlayıcı ve alternatif tıp; yaşlı birey; huzurevi*

Introduction

Complementary and alternative medicine (CAM) is defined by the National Center for Complementary and Alternative Medicine as a group of diverse medical and healthcare systems, practices, and products that are not presently considered to be part of conventional medicine[1]. Although CAM have been used since the time humanity has come into existence, it has started to be used widely after the 90's. In the United States of America, use of CAM increased from 33.8% to 42.1% between 1990 and 1997[2]. CAM has increased due to factors such as symptoms of a disease, dissatisfaction with health care teams and medical outcomes, high health care charges, side effects of drugs or treatments, lack of control in their own health care practices[3–8]. In a systematic review, prevalence rates of CAM among general population has been

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reported between 5% and 74.8%[9]. CAM usage rates may differ between countries or even regions. The usage of CAM varies among cultures according to beliefs, religions, lifestyle, and probably, specific herbs that grow in certain geographical area. CAM usage in Turkey had been subject of some studies. In these studies, the percentage of CAM usage varies between 35.3% and 86.3%[10–15]. In studies carried out on elderly individuals, the percentage of CAM usage varies between 27.7% and 88%[8,16–26]. These methods have been preferred mostly by elderly who are well-educated[3,16,19] have a high socio-economical status[19,20], are female[17,19,27,28], and are younger elderly[16]. The elderly people have more chronic diseases and disabilities, uses more medications, and often needs more health care services than younger[29]. Rates of chronic diseases are positively associated with CAM usage rates[5,16,21]. As a result, more CAM use can be seen in elderly people in the future. Healthcare professionals'knowledge of the factors which ease or blocks the use of CAM is important in order to protect the health of the elderly population and maintain their safety. In the literature, it has been stated that patients/elderly who used CAM do not inform healthcare personnel, also healthcare personnel do not question CAM usage[12,15,18,30]. Health professionals should assess for CAM use and increase their understanding about the kind and reason of the CAM therapies for comprehensive and qualified care. In addition, it should be assessed whether elderly continue their own medications while using these methods and whether they benefit or get harm from these methods[18]. Although several studies on the determination of CAM methods among the elderly exist[16–18,20,21,23,24,26,31] there is only a single study carried out in Turkey[25]. Additionally there is not any study on usage of CAM among elderly living in nursing homes. Elderly living in their own houses can be followed by caregivers about medicine and CAM usage. But evaluation of the CAM usage among elderly in nursing homes should be carried out by the nurses regularly. This study was planned to determine the CAM applications and factors associated with its use among elderly people living in nursing homes in Istanbul in Turkey.

Material and Method

Sample

This study was made in two nursing homes in Istanbul in Turkey between December 2012 and May 2013. The study was conducted with 230 of the 357 (64.4%) elderly who living two nursing homes. The patients were aged 65 years and older, had no psychiatric disorder and communication problems and were conscious and consented to participate in the study. Prior to the study, Marmara University Ethics Committee permission was obtained. All elderly were made aware of the proposed study procedures and freely gave written informed consent.

Data Collection Form

Data was collected by the researchers in a comfortable setting via questionnaire method using the data collection form developed by the researchers. Data collection form included questions on socio-demographic characteristics (age, sex, marital status, educational status, economical status, chronic diseases, regular medication usage, etc.) and CAM usage (CAM types used by elderly, reasons to choose these methods, the benefits and harms of these methods, sources of information for these methods, whether the elderly report using these methods to health professionals). A total of 23 questions were asked and data collection takes approximately 15 minutes.

Data were assessed by using the SPSS 15.0 program (SPSS Inc., Chicago, IL, USA)[32]. In order to analyze the data, means, frequencies, and percentages were calculated. The t-test for independent samples was used to analyze the difference in term of age between patients who use CAM and those who do not. The difference regarding dichotomous and categorical variables between patients who use CAM and those who do not was evaluated with Pearson's chi-square test. The Fisher's exact test was used when the expected value in any box of the chi-square tables containing the dichotomous variables were below 5, and the Pearson's chi-square test was used when all or 80% of the expected values in any box of the chi-square tables containing the categorical variables were above 5. A level of significance of $p < 0.05$ was established prior to data collection.

Results

Mean age of the elderly was 71.86±6.70 years. Among 230 elderly, 61.7% were female and 62.6% were married. The majority of the elderly graduated from elementary school (44.3%), more than half of them had social security (87.4%), approximately half of them were retired (44.8%) and 67.8% had a medium level of income. In this study, 74.8% had at least one chronic disease, 73.9% were using medications regularly, 59.1% were using CAM methods (Table 1).

A percentage of 55.2 of elderly used average 5.13±3.62 (min, max: 1, 15) type herbs/herbal supplements. The

most frequently used herbs were parsley (32.6%), garlic (30.9%), mint (27.8%), black grape seed (20.9%), black mulberry (20.4%), green tea (20.4%), sage (20.4%), nettle (18.3%), and linseed (16.5%). A percentage of 53.5 of elderly used average 3.15±2.57 (min, max: 1, 11) type non-herbal supplements. The most frequently used non-herbal supplements were honey (31.7%), vitamin B (23.9%), Vitamin C (20.4%), fish oil (19.1%). Among other CAM methods, the elderly mostly used prayer (33.9%), music (18.3%), massage (9.6%), thermal spring (7%), and cupping (6.1%) (Table 2).

A percentage of 69.9 of elderly benefited and a percentage of 0.7 of elderly harmed from the CAM methods they used. Elderly frequently did not tell the healthcare personnel that they have used these methods (65.4%). The reasons for not telling the healthcare personnel were not feeling the need to tell the healthcare personnel (31.6%), or not being questioned by the healthcare personnel on this subject (30.9%) and disapproving of these methods (8.1%). When the reasons for using these methods were

Table 1. *Demographic Characteristics of Elderly*

Variables		n	%
Age (years) (mean±SD)		71.86±6.70 (min, max: 65, 91)	
Gender			
	Female	142	61.7
	Male	88	38.3
Marital status			
	Single	86	37.4
	Married	144	62.6
Education			
	Illiterate	23	10.0
	Literate	36	15.7
	Elementary school	102	44.3
	Secondary school	28	12.2
	High school	41	17.8
Social security			
	Yes	201	87.4
	No	29	12.6
Job			
	Housewife	97	42.2
	Worker	11	4.8
	Officer	3	1.3
	Retired	103	44.8
	Own business	16	7.0
Level of income			
	Poor	19	8.3
	Moderate	156	67.8
	Good	55	23.9
Presence of a chronic disease			
	Yes	172	74.8
	No	58	25.2
Regular drug use			
	Yes	170	73.9
	No	60	26.1
CAM usage			
	Yes	136	59.1
	No	94	40.9

CAM, complementary and alternative medicine; SD, standart deviation

Table 2. *The types of CAM used by elderly*

		n	%
Herbs*		127	55.2
	Parsley	75	32.6
	Garlic	71	30.9
	Mint	64	27.8
	Thyme	58	25.2
	Black grape/seed	48	20.9
	Black mulberry	47	20.4
	Green tea	47	20.4
	Sage	47	20.4
	Nettle	42	18.3
	Linseed	38	16.5
	Black cumin	28	12.2
	Radish	34	14.8
	Ginger	24	10.4
	Cinnamon	18	7.8
	Echinacea	16	7
	Chicory	14	6.1
	Gingko biloba	2	0.9
	Ginseng	2	0.9
Non-herbal supplements*		123	53.5
	Honey	73	31.7
	Vitamin B	55	23.9
	Vitamin C	47	20.4
	Fish oil	44	19.1
	Vitamin D	35	15.2
	Vitamin E	28	12.2
	Royal jelly	27	11.7
	Vitamin A	27	11.7
	Magnesium	18	7.8
	Omega 3–6–9	17	7.4
	Coenzyme Q10	16	7
Other Therapies*			
	Prayer	78	33.9
	Music	42	18.3
	Massage	22	9.6
	Thermal spring	16	7
	Cupping	14	6.1
	Acupuncture	5	2.2
	Reflexology	4	1.7
	Breathing therapy	4	1.7
	Reiki	3	1.3
	Yoga	3	1.3

CAM, complementary and alternative medicine. *More than one option was selected.

asked; the participants stated more than one reason. Elderly used these methods because these methods made them feel better (80.1%), they thought these methods were beneficial (60.3%), these methods increased immunity (32.4%), they thought these methods support medical treatments (22.8%), had less side effects (18.4%), they did not benefit from medical treatment (17.6%), these methods were cheaper (8.8%) and they did not have another option (5.9%). A percentage of 64.7 of the elderly have heard of these methods from friends and family, the media (32.4%), healthcare personnel (25%), pharmacies (8.1%), and the internet (6.6%) (Table 3).

There were a statistically significant differences between elderly who use and who do not use CAM methods regarding education level (p = 0.016), presence of a chronic disease (p = 0.011) and regular drug use (p = 0.004). CAM usage rate was higher among elderly who graduated from secondary school, had chronic disorders, and used medicines regularly. On the other hand, there were no statistically significant differences between elderly who use and who do not use CAM methods regarding age, gender, marital status, social security, job, level of income (p >0.05) (Table 4).

Table 3. *Characteristics related to CAM usage (n=136)*

	n	%
State of benefiting from CAM usage		
Yes	95	69.9
Partially	28	20.5
No	13	9.6
State of harming from CAM usage		
Yes	1	0.7
No	134	98.5
Partially	1	0.7
Healthcare personnel's state of being aware of CAM usage		
Yes	47	34.6
No	89	65.4
The reasons of healthcare personnel's unawareness*		
I did not feel the need to tell	43	31.6
The healthcare personnel does not ask questions	42	30.9
The healthcare personnel will disapprove	11	8.1
The healthcare personnel is not knowledgeable about CAM	8	5.9
The time of healthcare personnel is limited	5	3.7
Reasons for CAM usage*		
It makes me feel better	109	80.1
I think it is beneficial	82	60.3
It increases my body defense/immunity	44	32.4
Support to my medical treatment	31	22.8
It has less side effects	25	18.4
I do not benefit from my medical treatment	24	17.6
It is cheaper than medical treatment	12	8.8
I do not have any other option	8	5.9
Sources of information on CAM*		
Friends-family	88	64.7
Media-TV	44	32.4
Healthcare personnel	34	25
Pharmacy	11	8.1
Internet	9	6.6
Books/magazines	8	5.9

CAM, complementary and alternative medicine. *More than one option was selected.

Discussion

Comorbid conditions which increase with age, the elderly's wish to increase the quality of life and manage chronic problems leads them to be in search of CAM[8]. CAM methods used by elderly might vary according to geographical areas and culture. Health care providers must be aware that elderly are using CAM and are satisfied with their use[8,33]. Elderly may benefit from some CAM methods but during some CAM methods usage, undesired and even life-threatening side effects may occur. Health professionals play an important role in defining these side effects in early phases, and take precautions. Therefore, health professionals should question elderly on CAM usage[34].

The Frequency of CAM Usage

In this study, more than half of the elderly (59.1%) used at least one of the CAM methods. In studies carried out on elderly about CAM usage, CAM usage rates vary between 27.7% and 88%[8,16–26]. Because different CAM methods have been investigated in studies, different results on the frequency of CAM usage might have been obtained. Findings of this study are parallel to the literature.

CAM Methods Used by Elderly

The most preferred CAM type in this study was herbs. A percentage of 55.2 of elderly used average 5.13±3.62 (min, max: 1, 15) type herbs/herbal supplements. In parallel to this findings, Astin et al.[16] and Loera et al.[23] found that herbs are the most common CAM type used by the elderly. Among CAM methods, the use of herbs has increased in the last two decades.[35] In general; elderly people believe that herbs are safe, side effect free, and non-addictive. Because herbs are assumed to be natural and safe, they are sold in many markets and stores, are easily accessed and do not need to be prescribed[36].

Table 4. *Factors associated with CAM usage (n=230)*

		Non CAM users (n=94)	CAM users (n=136)	p
Age (years) mean±SD		71.61±6.37	72.03±6.94	0.633[h]
Gender				
	Female	56 (58.0)	86 (84.0)	0.524[t]
	Male	38 (36.0)	50 (52.0)	
Marital status				
	Single	30 (35.6)	57 (51.4)	0.124[t]
	Married	64 (58.4)	79 (84.6)	
Education				
	Illiterate	8 (9.4)	15 (13.6)	***0.016**[t]
	Literate	14 (14.7)	22 (21.3)	
	Elementary school	51 (41.7)	51 (60.3)	
	Secondary school	4 (11.4)	24 (16.6)	
	High school	17 (16.8)	24 (24.2)	
Social security				
	Yes	84 (82.1)	117 (118.9)	0.546[ŧ]
	No	10 (11.9)	19 (17.1)	
Job				
	Housewife	36 (39.6)	61 (57.4)	0.536[ŧ]
	Worker	3 (4.5)	8 (6.5)	
	Officer	2 (1.2)	1 (1.8)	
	Retired	45 (42.1)	58 (60.9)	
	Own business	8 (6.5)	8 (9.5)	
Level of income				
	Poor	7 (7.8)	12 (11.2)	0.808[t]
	Moderate	66 (63.8)	90 (92.2)	
	Good	21 (22.5)	34 (32.5)	
Presence of a chronic disease				
	Yes	69 (76.4)	118 (110.6)	***0.011**[t]
	No	25 (17.6)	18 (25.4)	
Regular drug use				
	Yes	60 (69.5)	110 (100.5)	****0.004**[t]
	No	34 (24.5)	26 (35.5)	

*p <0.05; **p <0.01; [h]t-test; Ŧ Pearson's chi-square test; [ŧ]Fisher's exact test.
The values in the parentheses show the expected values.
CAM, complementary and alternative medicine; SD, standart deviation.

In this study, the most preferred herbs by the elderly are parsley, garlic, mint, thyme, black grape seed, black mulberry, green tea, sage, nettle, and linseed; respectively. It has been reported that chamomile, heliotrope and other herbal teas including licorice, hibiscus, vervain, linden[17], garlic[16,20], echinacea[18], gingkgo[16,20], ginseng[16,20] and phytotherapeutic products[27] are commonly consumed by the elderly. Consistent with the literature, in this study, herbs have been preferred primarily; however, the herb kinds that the elderly use in our study are different. The reason for this may be related to the variety of herbs that exist in a specific region and certain geographical and climate conditions.

In this study, herbs and non-herbal supplements were used frequently by elderly (including multivitamins). A percentage of 53.5 of elderly used at least one type non-herbal supplements. Mean non-herbal supplement number/type used by elderly were 3.15±2.57. The use of dietary supplements such as vitamins and multivitamins are increasing around the world. In the USA, approximately half of the adult population regularly consumes one or more dietary supplements[37]. In this study, we have observed that the elderly have used non-herbal supplements such as honey, vitamins (vitamin B, vitamin C, vitamin D, vitamin E, and vitamin A; respectively), fish oil, royal jelly, magnesium, omega 3-6-9, and coenzyme Q10 at rates differing between 7% and 31.7%. Previous studies showed that elderly individuals mostly use vitamin E[18,20], Ca[20,26], magnesium[26], iron[26], vitamin C[18,20], vitamin D_3[26], B_{12}[26], folic acid[26], chondroitin sulphate[18] and minerals[18]. Our study results are in line with the literature.

When we examined other CAM types, we found that the elderly mainly used prayer (33.9%), which was followed by music (18.3%), massage (9.6%), and thermal springs (7%); respectively. When we examined the literature, other mainly used CAM types included prayer[31], spiritual practices[19], massage[8,20,31], exercise/movement therapies[19], special diets[19], chiropractice[8,19,24], meditation[19,20,24,31] and breathing exercises[20]. The reason that praying was the most preferred method in this study is thought to originate from the fact that elderly people resort to religious practices in terms of solving health problems in Turkey, where the majority of the population is Muslim. In this study, we have observed that applications such as breathing exercises, meditation, chiropractice, acupuncture, hypnosis, yoga and energy therapies are rarely or never used. The reason for this may be CAM practitioners not being common in Turkey and Turkish elderly not being informed about these methods.

Informing Health Professionals about CAM Usage

In this study, although most of the (69.9%) of the elderly who used CAM methods have told that they benefited from these methods, it was found that 65.4% of them did not inform healthcare personnel.

The elderly reported that the reasons for not telling included not feeling the need to tell (31.6%), or not being questioned by the healthcare personnel about CAM usage (30.9%) and not approving such usage (8.1%). Also, in previous studies, it was found that the elderly substantially benefited from CAM methods and that they did not tell the healthcare personnel about these methods at varying rates of 47% and 58% [8,16]. The reasons for this include 'not being asked by healthcare personnel on the subject, the participants not knowing that they should have told they used these methods and thinking that it is not important for their care'[8]. Our research findings are in parallel with these results. In summary, the elderly being afraid to share information with the healthcare personnel about the usage of CAM methods causes a weak

communication between the elderly and the healthcare personnel. Unless the obstacles related to information sharing are noticed and an open communication is provided, the elderly and the healthcare personnel will be less aware of the interaction between traditional medical treatments and CAM methods[16].

The Reasons for CAM Usage

It was found that the elderly use these methods because they felt good (80.1%), CAM are beneficial (60.3%), CAM increased body defense/immunity (32.4%), they did not benefit from medical treatment (17%), CAM supported to medical treatment (22.8%), and CAM's side effects were fewer compared to traditional medical treatments (18.4%). In the literature, the elderly people reported that they used CAM methods due to reasons similar to those found in our study, such as being dissatisfied with traditional medical treatment[16], fearing medication side effects[16], improving the general state of health[8,16], treating health problems[8] and staying healthy[31].

Sources of Information

When we examined how the elderly reached sources of information on these methods, it was determined that 64.7% of the participants have heard of these methods from friends and family, the media (32.4%), healthcare personnel (25%), pharmacies (8.1%), and the internet (6.6%). Schnabel et al.[26] and King and Pettigrew[31] also stated that elderly individuals used these methods because they were advised to do so by friends-family, doctors, pharmacists, medical or nonmedical practitioners, and the TV-radio or they chose to do so on their own. Many patients emphasize that they want to get involved in the diagnosis, planning and caring processes regarding their illness. In order to do this, they receive information through various sources. During the process of decision making about health care, open communication should be established and judgmentalism should be avoided in order to ease the patient's acquisition of correct and reliable information. In every stage of treatment, healthcare personnel should evaluate the options with patients before providing traditional medical treatment so that they can prevent insensible and secret use of CAM methods[38].

Factors Associated with CAM Usage

In this study there were statistically significant differences between elderly who use and who do not use CAM methods in terms of education level; secondary school graduates were using CAM more. Similar to this study's results, it has been reported that CAM usage is more common among people with higher levels of education[16,19,21].

In this study, the majority of the elderly individuals had one chronic disease (74.8%) and CAM usage was more common among elderly individuals who had a chronic disease and who used medications regularly. Elderly individuals use an increasing amount of medication due to chronic health problems that increase during old age. Thus, this condition increases both the morbidity and mortality risks related to medication side effects[39]. Elderly individuals tend towards CAM methods due to both physiological factors such as chronic diseases and unwanted situations caused by multiple medications use[16,20,8]. Results of relevant studies support our findings. In previous studies, it has been reported that CAM usage is more common among people who have multiple health problems[21,23] those who suffer from health problems such as chronic pain[8], arthritis[8,16] and depression/anxiety[16] and those practice medication[16].

In this study, there were no statistically significant differences between elderly who use and who do not use CAM methods regarding age, gender, marital status, social security, job, level of income. Cheung et al.[8] found that there is no relationship between socio-demographic characteristics such as age, gender, marital status and income level and CAM usage. Cheung et al.'s results are parallel to this study results. But other studies that evaluate CAM usage according to sociodemographic characteristics among the elderly, it was reported that females[17,19,21,23], young elderly[16,21], unmarried[23] and high income level[19] CAM methods were more frequently used.

CAM is used commonly by elderly people living in nursing homes in Istanbul in Turkey. Herbal supplements (parsley, garlic and mint) and non-herbal supplements (honey, vitamin B, Vitamin C) were used commonly. Elderly generally do not inform healthcare personnel that they have used these methods. Most of the elderly who used CAM methods benefit from these methods without getting any harm. The rate of CAM usage is higher among elderly who graduate from secondary school, have chronic disorders, and use medicine regularly.

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