

## THE VIEW OF PATIENTS WITH CHRONIC OBSTRUCTIVE PULMONARY DISEASE (COPD) ON COMPLEMENTARY AND ALTERNATIVE MEDICINE (CAM) IN EASTERN TURKEY

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The purpose of this study was to examine the frequency of complementary and alternative medicine usage in Chronic Obstructive Pulmonary Disease (COPD) patients living in the eastern part of Turkey. In this study a descriptive design was used. The study was conducted with 216 patients who were present at the clinic. Data were gathered by the researchers in a comfortable setting through questionnaire method using the data collection form developed by the researcher. Individualised questionnaire-based interviews were also conducted among the 216 adult patients. The questionnaire included demographic information, clinical information, use of conventional therapies and complementary and alternative therapy. According to the findings obtained in this research, the frequency of CAM use among Turkish COPD patients (72.1%) was close to the highest levels reported in the literature.

**Key words:** Complementary and alternative therapy, COPD, Turkey

**Introduction**

Throughout the world, patients with chronic diseases tend to be high utilisers of health care resources and/or the health care system. Complementary and alternative medicine (CAM) has been used for decades in the management of chronic diseases like cancer, diabetes, cardiovascular diseases and stroke (Mao et al. 2011; Broom et al. 2010; Ogbera et al. 2010; Khalaf & Whitford 2010; Decker et al. 2007; Yeh et al. 2006; Zick et al. 2005; Shah et al. 2008). Chronic obstructive pulmonary disease is one of a number of common disorders for which there is a varied literature in support of CAM therapies. Chronic obstructive pulmonary disease (COPD) is a respiratory disorder in that it is chronic and characterised with decreased airflow. COPD has characteristics such as the signs of coughing and wheezing. It has two distinct conditions in terms of disease onset: frequency of symptoms and reversibility of airway obstruction. Unsatisfactory treatment outcomes from conventional drugs and adverse effects associated with several classes of drugs, such as steroids and theophylline, contribute substantially to the increasing popularity of CAM and, in particular, herbal medicine (Celli et al. 2004). National Center for Complementary and Alternative Medicine (NCCAM) defines CAM as a group of diverse medical and health care systems, practices and products that are not generally considered part of conventional medicine ([www.cdc.gov/nchs/data/ad/ad343.pdf](http://www.cdc.gov/nchs/data/ad/ad343.pdf)).

Despite all the current developments in pharmacological treatments, the use of CAM methods continues to show a remarkable increase, both in developing and in developed countries (Arguder et al. 2009). In the USA, a study conducted at the national level with a large sampling indicated that the usage rate of alternative therapies had reached 42.1% in 1997, up from 33.8% in 1990 (Eisenberg et al. 1998). Although 40% of the general USA population was using CAM, in Turkey this percentage was reported at 80.2% of healthy individuals (Ernst 1999; Oguz & Pinar 2000). The prevalence of CAM use in Turkish patients with chronic diseases is notably higher than in other typical populations (Kurt et al. 2004). The prevalence of CAM use among adult patients ranged between 4–79% (for example, 41–62% in the USA, 59% in the UK, 26.5% in Germany, 27.2% in Singapore) (Barnes et al. 2004; Slader et al. 2006). Although many reported studies are addressed to CAM practices in the world (Blanc et al. 1997; Janson et al. 1997; Ernst 1998; Ng et al. 2003), there are limited studies of CAM usage among CAPD patients in Turkey (Arguder et al. 2009; Kurt et al. 2004; Orhan & Sekerel 2002; Abadoglu et al. 2008; Babayigit et al. 2008; Ediger et al. 2008; Erci 2007).

The aims of the present study were to identify the following:

1. CAM usage frequency in Chronic Obstructive Pulmonary Disease (COPD) patients living in the eastern part of Turkey;
2. the most frequently used CAM method and demographic and disease-associated factors that affect CAM use.

**Materials and Methods****Sample**

This study was a descriptive survey conducted at a general hospital in the city of Kars, at the eastern part of Turkey.

The study was conducted with 216 patients who were present at the clinic. The patients were  $\geq 18$  years old, had no psychiatric disorder and communication problems, were conscious, and consented to participate in the study.

### Research design

In this study a descriptive design was used.

### Data collection form

Data were gathered by the researchers in a comfortable setting through questionnaire method using the data collection form developed by the researcher. The data collection form consisted of two parts. The first part sought to elicit information on the sociodemographic and illness-related details on the patients, such as age, sex, marital status, educational status, economic status, how long they have or have been using CAM, whether the doctor or the nurse uses knowledge of CAM, what the doctor or the nurse think about using CAM, and why they prefer CAM usage were questioned. The second part of the administered questionnaire questioned which of the CAM methods were used by the patients.

### Ethical issues

Before the application of data collection tools, patients were informed about the objective of the research and their informed consent was received on their voluntary participation in the research. Patients who accepted to participate in the research were given the questions; approximately 30-40 minutes were allocated to each patient for the completion of the questionnaire. Permission for conducting this study was obtained from the management of the hospital. Participants were informed of the purpose and procedure of the study. Written consents were obtained from the participants.

### Statistical analysis

The research data were analysed with regard to number, percentage, arithmetic mean and chi-square, using the SPSS 15.0 program (SPSS Inc., Chicago, IL, USA). Chi-square analyses were conducted among the groups to test for statistically significant differences. In the analysis of data, the CAM use status of patients was taken as a dependent variable, and the independent variables were based on their demographic and disease characteristics. The statistically significant level was set at  $p < 0.05$ .

## Results

The results show a total of 216 patients 64.2% male. The mean age of the sample was  $57.9 \pm 16.8$  years. More than half of the participants were married (62.2%); the highest educational level of participants were illiterate (41.7%), and their perceived income level was low (57.4%). Illness duration was  $12.24 \pm 5.79$  years. Number of symptoms experienced by patients was  $9.73 \pm 4.45$ . The percentage of patients who used their medication regularly was 96.7%, and 90.8% of the cases used at least one CAM method. 62.0% of patients included in the study have used CAM treatment for 14 years and over; 76.9% have known that their doctor or nurse has used CAM treatment; 41.7% have not interfered with their doctor or nurse about usage of CAM treatment; and 45.4% have used CAM treatment since they became aware that it is useful.

The CAM methods used by the patients are 56.7% herbal medicine; 78.5% foods; 45.8% deep breathing; 65.6% use of herbal tea; 47.7% application of vapour; 45.2% receiving massage; 47.3% receiving exercise; 60.2% entering the asthma cave; 52.1% taking vitamin and mineral pills.

Patients report that they use herbal medicine and foods for reducing dyspnoea, mucus secretion, and deep breathing. They use herbal tea for reducing mucus secretion, for comfortable breathing; vitamin and mineral pills for improving health, deep breathing. Exercise and massage are used for mucus secretion, relaxing, and asthma cave use treatment of COPD (Table 1).

The percentage distribution of patients who use different methods include the following: patients who use mallow tea (39.5%), nigella (43.6%), honey (43.3%), mint tea (48.6%), sage tea (45.2%), rosehip (49.8%), thyme tea (32.5%), lemon balm tea (45.2%) and gren tea (46.6%) (The cases use more than one CAM method).

There is no statistically significant difference between patients who use and who do not use CAM methods regarding age, gender, marital status, educational status and income level ( $p > 0.05$ ).

## Discussion

In people with chronic diseases like COPD, CAM usage might be prevalent, and the methods used might vary according to geographical areas and culture (Helms 2006). In this study, which assesses the CAM methods practised among patients in eastern Turkey, we determined that 72.1% of patients use at least one CAM method. Akinci et al., Abadoğlu et al., Arguer et al. reported that CAM methods are common with COPD patients in Turkey, supporting our results (Akinci et al., 2011; Arguder et al. 2009; Abadoglu et al. 2008). Many factors, such as the perceived level of the seriousness of the disease,

the symptoms causing discomfort to the patients, the culture surrounding the patient and the accessibility and availability of the alternative treatments, affect the rate of CAM use (Fouladbakhsh & Stommel 2007).

In Turkey, a country with strong and rich cultural traditions, it is not surprising that CAM use has a high prevalence. We determined that patients use each CAM method for different purposes, such as, treatment of COPD, relaxing,

**Table 1** Demographic characteristics of patients using CAM Treatment

Features	N	%
<b>Gender</b>		
Female	138	64.2
Male	68	35.8
<b>Educational Status</b>		
Illiterate	90	41.7
Literate	26	12.0
primary education	72	33.3
High School and higher	28	13.0
<b>Marital Status</b>		
Married	138	62.2
Single	78	37.8
<b>Income Level</b>		
Income is less than expense	124	57.4
Income equals to expense	38	17.6
Income is more than expense	54	25.0
<b>Total</b>	<b>216</b>	<b>100</b>

improving health. Ng et al., Celli et al., George et al., reported that CAM usage is higher in patients with worse breathing functions (Celli et al. 2004; Ng et al. 2003; George et al. 2004). Similarly, Akinci et al. found that exacerbations, hospitalisation and severe symptoms were related to CAM usage, and patients who experienced more exacerbations, who were more frequently hospitalised and who had more severe symptoms reported higher CAM usage (Akinci et al. 2011). COPD patients use CAM methods for eliminating breathing problems. Several herbal remedies with the potential to improve pulmonary function, to relieve symptoms or to reduce exacerbation severity and frequency were identified in the treatment of COPD. However, the effectiveness of herbal remedies for treating COPD has not been established (Abadoglu et al. 2008). Similarly, in our study, the results showed that COPD patients evaluated the efficacy of CAM as useful. In this study too, patients used their medications regularly. 96.7% and 90.8% of the cases used at least one CAM method. Akinci et al., Slader et al. determined that a large portion of patients used CAM methods (Slader et al. 2006, Akinci et al. 2011). 62.0% of patients included in the study have used CAM treatment for 14 years and over; 76.9% has known that their doctor or nurse has used CAM treatment; 41.7% has not interfered with their doctor or nurse over usage of CAM treatment; and 45.4% have used CAM treatment since they come to know that it is useful (see Table 2). Similarly, Abadoglu et al., Mazur et al., Braganza et al., Arguder et al. and Akinci et al., Orhan et al., George et al., Singer et al. reported that patients use some of the CAM without any recommendation; some with the suggestions of friends or relatives, and some with the health professionals' recommendations. Studies report that patients gather information from various sources such as friends, relatives, the media and physicians (Arguder et al. 2009; Orhan & Sekerel 2002; Abadoglu et al. 2008; Akinci et al. 2011; Fouladbakhsh & Stommel 2007; George et al. 2004; Mazur et al. 2001; Braganza et al. 2003, Singer et al. 2007).

**Table 2:** CAM Usage of Health Professionals

How long have you used CAM?		
1-6 years	44	20.4
7-13 years	38	17.6
≥14 years	134	62.0
Does doctor or nurse use knowledge of CAM?		
Yes	186	76.9
No	30	23.1
What is the doctor or nurse thinking about using CAM?		
Does not interfere	90	41.7
Does not advise	38	17.6
Suggest	12	5.6
Does not know	76	35.2
Why do you prefer CAM?		
I do not trust drug therapy	40	18.5
My environment	40	18.5
I believe that it is useful	98	45.4
Other	16	7.4
<b>TOTAL</b>	<b>216</b>	<b>100</b>

The most commonly used CAM methods by the patients include 56.7% herbal medicine, 45.8% foods, 78.5% deep breathing, 65.6% using herbal tea, 47.7% applying vapour, 45.2% receiving massage, 47.3% receiving exercise, 60.2% entering the asthma cave, 52.1% taking vitamin and mineral pills. Slader et al., Sidora-Arcoleo et al., Akinci et al. reported that among the various CAM methods herbal products, breathing techniques, prayer and massage, applying vapour, massage, herbal products are the most common CAM methods used by COPD patients (Slader et al. 2006; Akinci et al. 2011; Sidora-Arcoleo et al. 2007). Two studies earlier conducted in Turkey, which support our results, reported that the most popular CAM methods were herbal remedies in COPD patients (Arguder et al. 2009; Abadoglu et al. 2008). We determined in our study the percentage of patients who use the following herbal remedies to include patients who use mallow tea (39.5%), nigella (43.6%), honey (43.3%), mint tea (48.6%), sage tea (45.2%), rosehip (49.8%), thyme tea (32.5%), lemon balm tea (45.2%) and green tea (46.6%). Similar to our findings, it has been reported that herbal products are commonly used CAM methods in Turkey, and these are consumed in form of infusions or herbal tea (Kav 2009; Tarhan et al. 2009; Yildirim et al. 2006; Tas et al. 2005).

The present study also showed that herbal therapy was the most often used form and that the most commonly preferred/used herbals were lime, sage, green tea, chamomile and linseed. In the present study, nutrition and vitamin supplementation and animal-derived products were tested by many patients during the course of their ailment. Among these were trials of drinking *Nigella sativa* in honey, radish or onion/garlic mixtures, or mixtures made with olive oil and quail eggs (Abadoglu et al. 2008; Fouladbakhsh et al. 2007; Ziment 2003). We found that characteristics such as demographics and disease severity did not influence the use of CAM. The present study also shows that no differences exist between the demographics of patients using and those not using CAM, and these results are in agreement with several other studies reported in the literature (Huntley & Ernst 2000).

## Conclusion

According to the findings obtained in this research, the frequency of CAM use among Turkish COPD patients (72.1%) was close to the highest levels reported in the literature. The COPD patients were found to use CAM methods more frequently. The most frequently used CAM methods were herbal treatments. The duration of doctor diagnosis, hospitalisations, and education on diseases has a higher impact on CAM use in COPD patients.

## References

1. Abadoglu, O., Cakmak, E., Kuzucu., D.S. (2008). The view of patients with asthma or chronic obstructive pulmonary disease (COPD) on complementary and alternative medicine. *The Journal of Allergy and Clinical Immunology* 36: 21–25.
2. Advance Data, From Vital and Health Statics. Available at: <http://www.cdc.gov/nchs/data/ad/ad343.pdf>.
3. Akinci, C.A., Zengin, N., Yildiz, H., Sener, E., Gunaydin., B. (2011). The complementary and alternative medicine use among asthma and chronic obstructive pulmonary disease patients in the southern region of Turkey. *International Journal of Nursing Practice* 17: 571-582.
4. Arguder, E., Bavbek, S., Sen, E., Köse, K., Keskin, O., Saryal, S., Misirligil, Z. (2009). Is there any difference in the use of complementary and alternative therapies in patients asthma and COPD? A crosssectional survey. *The Journal of Asthma* 46: 252–258.

5. Babayigit, A., Olmez, D., Karaman, O., Uzuner, N. (2008). Complementary and alternative medicine use in Turkish children with bronchial asthma. *Journal of Alternative Complementary Medicine* 14: 797–799.
6. Barnes, P.M., Powell-Griner, E., McFann, K., Nahin, R.L. (2004). Complementary and alternative medicine use among adults: United States.
7. Blanc, P.D., Ware, G.K., Katz, P.P., Smith, S., Yelin, E.H. (1997). Use of herbal products, coffee or black tea and over-the-counter medications as self-treatments among adults with asthma. *The Journal of Allergy and Clinical Immunology* 100: 789–791.
8. Braganza, S., Ozuah, P.O., Sharif, I. (2003). The use of complementary therapies in inner-city asthmatic children. *Journal of Asthma* 40: 823–827.
9. Adams, J., Nayar, K.R. (2010). The use of traditional, complementary and alternative medicine in Sri Lankan cancer care: Results from a survey of 500 cancer patients. *Public Health* 124: 232–237.
10. Celli, B.R., MacNee, W. (2004). Standards for the diagnosis and treatment of patients with COPD: A summary of the ATS/ERS position paper. *The European Respiratory Journal* 23: 932–946.
11. Decker, C., Huddleston, J., Kosiborod, M. (2007). Self-reported use of complementary and alternative medicine in patients with previous acute coronary syndrome. *The American Journal of Cardiology* 99: 930–933.
12. Eisenberg, D.M., Davis, R.B., Ettner, S.L., Apel, S., Wilkey, S., Van Ompay, M., Kesler, R.C. (1998). Trends in alternative medicine use in the United States, 1990-1997: results of a follow-up national survey. *The Journal of American Medical Association* 280: 1569–1575.
13. Ediger, D., Önal, B.B., Ege, E. (2008). Astım ve rinit hastalarında tamamlayıcı ve alternatif tedavi kullanımı (The usage of complementary and alternative medicine in patients with asthma and rhinitis). *Astım ve Alerji Immunoloji Dergisi* 6: 61–65.
14. Erci, B. (2007). Attitudes towards holistic complementary and alternative medicine: a sample of healthy people in Turkey. *Journal of Clinical Nursing* 16: 761–768.
15. Ernst, E. (1998). Complementary therapies for asthma: what patients use. *Journal of Asthma* 35: 667–671.
16. Ernst, E. (1999). Complementary/alternative medicine for asthma: we do not know what we need to know. *The Chest* 115: 1–3.
17. Fouladbakhsh, J.M., Stommel, M. (2007). Using the behavioral model for complementary and alternative medicine: The CAM healthcare model. *Journal of Complementary & Integrative Medicine* 4: 11.
18. George, J., Ioannides-Demos, L.L., Santamaria, N.M., Kong, D.C., Stewart, K. (2004). Use of complementary and alternative medicines by patients with chronic obstructive pulmonary disease. *The Medical Journal of Australia* 181: 248–251.
19. Helms, J.E. (2006). Complementary and alternative therapies: A new frontier for nursing education? *Journal of Nursing Education* 45: 117–123.
20. Huntley, A., Ernst, E. (2000). Herbal medicines for asthma: a systemic review. *Thorax* 55: 925–929.
21. Janson, C., Chinn, S., Jarvis, D., Burney, P. (1997). Physician-diagnosed asthma and drug utilization in the European Community Respiratory Health Survey. *European Respiratory Journal* 10: 1795–1802.
22. Kav, T. (2009). Use of complementary and alternative medicine: A survey in Turkish gastroenterology patients. *BMC Complementary and Alternative Medicine* 9: 41.
23. Khalaf, A.J., Whitford, D.L. (2010). The use of complementary and alternative medicine by patients with diabetes mellitus in Bahrain: A cross-sectional study. *BMC Complementary and Alternative Medicine* 10: 33.
24. Kurt, E., Bavbek, S., Pasaoglu, G., Abadoglu, O., Misirligil, Z. (2004). Use of alternative medicines by allergic patients in Turkey. *The Allergy and Immunopathology* 32: 289–294.
25. Mao, J.J., Palmer, C.S., Healy, K.E., Desai, K., Amsterdam, J. (2011). Complementary and alternative medicine use among cancer survivors: A population-based study. *Journal of Cancer Survivorship* 5: 8–17.
26. Mazur, L.J., De Ybarrondo, L., Miller, J., Colarsudo, G. (2001). Use of alternative and complementary therapies for pediatric asthma. *Texas Medical* 97: 64–68.
27. Ng, T.P., Wong, M.L., Hong, C.Y., Koh, K.T.C., Goh, L.G. (2003). The use of complementary and alternative medicine by asthma patients. *The Quarterly Journal of Medicine* 96: 747–754.
28. Ogbera, A.O., Dada, O., Adeyeye, F., Jewo, P.I. (2010). Complementary and alternative medicine use in diabetes mellitus. *West African Journal of Medicine* 29: 158–162.
29. Oguz, S., Pinar, R. (2000). Tamamlayıcı tıp yöntemlerinden en fazla hangileri tercih ediliyor? I. International & VII. National Nursing Congress Book, Antalya, Turkey, 358–360.
30. Orhan, F., Sekerel, B.E. (2002). Bronşial astım tedavisinde alternatif yöntemler (Alternative Therapies in bronchial asthma). *Türkiye Klinikleri* 4: 129–134.
31. Sidora-Arcoleo, K., Yoos, H.L., McMullen, A., Kitzman, H. (2007). Complementary and alternative medicine use in children with asthma: Prevalence and sociodemographic profile of users. *Journal of Asthma* 44: 169–175.
32. Singer, L., Karakis, I., Ivri, L., Gross, M., Botolin, A., Gazala, A. (2007). The characteristics of complementary and alternative medicine use by parents of asthmatic children in Southern Israel. *Acta Paediatrica* 96: 1693–1697.
33. Shah, S.H., Engelhardt, R., Ovbiagele, B. (2008). Patterns of complementary and alternative medicine use among United States stroke survivors. *Journal of Neurological Science* 271: 180–185.
34. Slader, C.A., Reddel, H.K., Jenkins, C.R., Armour, C.L., Bsnic-Anticevich, S.Z. (2006). Complementary and alternative medicine use in asthma: who is using what?. *Respirology* 11: 373–387.
35. Tarhan, O., Alacacioglu, A., Somali, I. (2009). Complementary/alternative medicine among cancer patients in the western region of Turkey. *Journal of The Balcan Union of Oncology* 14: 265–269.
36. Tas, F., Ustuner, Z., Can, G. (2005). The prevalence and determinants of the use of complementary and alternative medicine in adult Turkish cancer patients. *Acta Oncologica* 44: 161–167.

37. Yeh, GY., Davis, R.B., Phillips, R.S. (2006). Use of complementary therapies in patients with cardiovascular disease. *The American Journal of Cardiology* 98: 673– 680.
38. Yildirim, Y., Tinar, S., Yorgun, S. (2006). The use of complementary and alternative medicine (CAM) therapies by Turkish women with gynecological cancer. *European Journal of Gynaecologic Oncology* 27: 81–85.
39. Zick, S.M., Blume, A., Aaronson, K.D. (2005). The prevalence and pattern of complementary and alternative supplement use in individuals with chronic heart failure. *Journal of Cardiac Failure* 11: 586–589.
40. Ziment, I., (2003). Complementary and alternative medicine therapies for chronic obstructive pulmonary disease. Focus on