



ARAŞTIRMA / RESEARCH

Use of integrative medicines by chronic obstructive pulmonary disease patients and its relation with hopelessness levels

Kronik obstrüktif akciğer hastalığı tanısı almış bireylerin integratif yöntemleri kullanma durumu ve umutsuzluk düzeyleri ile ilişkisi

Gamze Muz¹, Ayser Erat², Şeydanur Şamdanlı³, Nisa Yavuzer Bayrak⁴

¹Nevşehir Hacı Bektaş Veli University, Department of Internal Nursing, ³Institute of Science, Nevşehir, Turkey

²Erciyes University, Department of Internal Nursing, Kayseri, Turkey

⁴Atatürk University, Department of Internal Nursing, Erzurum, Turkey

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Abstract

Purpose: Increase in chronic diseases significantly increases the use of integrative medicines in symptom management. This study aims to determine the use of integrative medicines and the levels of hopelessness of individuals with chronic obstructive pulmonary disease (COPD).

Material and Methods: This descriptive and cross-sectional study was conducted in a chest disease services with 259 COPD's patients. Data were collected with the Questionnaire Form and Beck's Hopelessness Scale.

Results: Of the participants, the most common integrative medicine was herbal methods (66.2%). The hopelessness level of the group using integrative medicine was high, but the difference between the groups was not statistically significant. The participants received information about the use of integrative methods from TV, radio and magazine and used integrative methods in symptom management.

Conclusion: The most common integrative medicine used was herbal methods. In addition, level of hopelessness did not affect integrative medicine's usage. The results of such findings are to identify the causes of integrative medicine use and to ensure education for healthcare professionals.

Keywords: Complementary medicine ; Chronic obstructive pulmonary disease, hope

Öz

Amaç: Kronik hastalıkların artması semptom yönetiminde integratif yöntemlerin kullanımını önemli ölçüde arttırmaktadır. Bu çalışma, Kronik Obstrüktif Akciğer Hastalığı (KOAH) olan bireylerin integratif uygulamaları kullanımını ve umutsuzluk düzeylerini belirlemeyi amaçlamaktadır.

Gereç ve Yöntem: Kesitsel ve tanımlayıcı nitelikteki bu çalışma, bir devlet hastanesinin göğüs hastalıkları hizmetlerinde yürütülmüştür. Veriler Anket Formu ve Beck'in Umutsuzluk Ölçeği ile toplanmıştır.

Bulgular: Katılımcıların %29,7'sinin integratif uygulamaları kullandığı, en sık görülen integratif uygulamaların bitkisel yöntemler olduğu (%66,2) saptandı. İntegratif uygulamaları kullanan grubun umutsuzluk düzeyi yüksekti, ancak gruplar arasındaki fark istatistiksel olarak anlamlı değildi. Katılımcılar integratif uygulamaların kullanımı ile ilgili bilgiyi TV, radyo ve magazinden aldığı ve intagratif uygulamaları en fazla semptom yönetiminde kullandıkları belirlenmiştir.

Sonuç: En sık görülen integratif uygulamalar bitkisel yöntemlerin olduğu, ayrıca umutsuzluk düzeyinin integratif uygulama kullanımını etkilemediği belirlenmiştir. Bu bulguların sonuçları doğrultusunda, integratif uygulama nedenlerini tanımlamak ve sağlık profesyonellerinin bu alanda hastalara eğitim vermesi önerilebilir.

Anahtar kelimeler: Tamamlayıcı tıp; Kronik obstrüktif akciğer hastalığı; umut

Yazışma Adresi/Address for Correspondence: Dr. Gamze Muz, Nevşehir Hacı Bektaş Veli University, Department of Nursing, Nevşehir, Turkey E-mail: gamzeucakan@gmail.com

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INTRODUCTION

Chronic obstructive pulmonary disease (COPD) is a critical health problem that is increasing worldwide. The World Health Organization (WHO) reported that more than three million people died in 2015 from COPD^{1,2}. It is reported that the respiratory diseases take the third place among the most common causes of death in Turkey, and 61.5% of these deaths were from COPD³. The increased symptom burden of patients causes treatment compliance problems and repeated hospitalizations. Although pharmacological treatments are frequently applied in COPD to reduce these problems, full recovery cannot be achieved^{4,6}. The patients with COPD use the non-pharmacological interventions⁷⁻¹². According to WHO report, 70%–80% of the individuals living in developed countries and three quarters of the individuals within the worldwide utilize from integrative medicines¹³. Integrative medicines such as herbal treatments, acupressure, aromatherapy, music therapy, reflexology, yoga, massage, religious practices are used by Turkish society⁷⁻¹⁰⁻¹²⁻¹⁴⁻¹⁸. It is reported that individuals with COPD use the integrative medicines in the management of symptoms such as fatigue, anxiety, depression, etc.^{7,9-12,19,20}. The progression of the disease stage and increasing symptoms in COPD patients restricts daily life activity, increases addiction and negatively affects the quality of life²¹⁻²⁴.

In the literature, the reasons for individuals' use of integrative medicines include the feeling good, symptom management, eliminating the side effects of drugs, and reducing hopelessness^{10,25,26}. In line with these results, the hopelessness experienced by individuals is important in the management of the disease. Patients may not be able to provide information about the use of integrative medicines to health professionals due to reasons such as the length of the treatment process of chronic diseases and the inability of the health professionals to allocate sufficient time to the patient^{10-12,27}. Studies on the factors causing the use of integrative medicines and assessing the knowledge, attitude and practice of respiratory patients in various geographical regions of Turkey are limited^{10-12,20}. For example, it has been reported that volcanic tuff formations, including harmful materials such as fibrous zeolite and erionite, at Cappadocia region cause benign and malignant respiratory diseases²⁸. Therefore, it is important to investigate respiratory diseases in this

region. However, to the our best knowledge there has been no study about the use of integrative medicines and hopelessness in Nevşehir province, which is located in the Cappadocian region of Central Anatolia. Hence, this study aims to determine of the integrative medicines usage frequency, the features of integrative medicines use and the levels of hopelessness of individuals with COPD and investigate of the between of integrative medicines use and levels of hopelessness.

This research was carried out as an descriptive and cross-sectional study to assess the hopelessness and to determine the integrative medicines usage of individuals with COPD.

Main research questions of this study were; what is the frequency of integrative medicines use by COPD patients?; which integrative medicines therapies do COPD patients use?; what are the sources of information of patients with COPD about integrative medicines?; why integrative medicines therapies do COPD patients use? And soes the hopelessness level of COPD patients affect integrative medicines' usage?

MATERIALS AND METHODS

This research was carried out as an descriptive and cross-sectional study. In the study, power analysis for each of the three sub-dimensions and total score types of the scale was calculated using the G-Power program²⁹. Considering the highest motivational loss subscale scores, the total number of samples should be 228 individuals, with a sample size of 95% confidence ($1-\alpha$), 80.2% test power ($1-\beta$) and $d = 0.3331$ effect size. 269 individuals were included in the study, since 10 people did not want to participate, the study was completed with 259 people between August 2018 and January 2019. Inclusion criteria included the following: aged 18 and over, verbal communication, at least 6 months after the diagnosis of COPD and patients who agreed to participate in the study.

The study protocol was carried out in accordance with the Helsinki Declaration of 1975 and an approval was obtained from the Nevşehir Hacı Bektaş Veli University Scientific Research Ethics Committee (Decision No: 2018.06.69). Patients were provided with information about the study, and verbal informed consents were obtained from all patients.

Measures

The data were collected using a questionnaire form and Beck's Hopelessness scale. Data collection tools were filled in by face-to-face interview method with individuals who met the sample selection criteria and agreed to participate in the research. The interview lasted at least 15 minutes and at most 20 minutes.

Questionnaire form

A questionnaire form was prepared in accordance with literature^{10,12,19,20} by researchers. The questionnaire form consisted of 22 questions in total and two parts; the first was related to patients' socio-demographic information (age, gender, marital status, educational status, profession, etc.) and the second was related to integrative medicines' usage information (integrative medicines used and its reason, the status of integrative medicines information, the belief in integrative medicines' method, etc.)

Beck's Hopelessness Scale

Beck's hopelessness scale was confirmed by Beck et al.³⁰ and the its Turkish validity and reliability has been approved by Seber et al.³¹ and Durak and Palabiyikoglu³². It consists of 20 items expressing as "Yes/No". Besides, it provides also a score ranging from 0 to 20. Note that, the level of hopelessness

increases with increasing the scores of individuals. In addition, the scale consists of three sub-dimensions: (a) feelings about the future, (b) loss of motivation, and (c) future expectations

Within the scope of this study, 10 patients were preapplied to test the functionality of the questionnaire and these patients were excluded from the study. The study was about 10-15 minutes on average. Cronbach's alpha value of the scale was found 0.86³¹. In this study, Cronbach's alpha value is 0.918.

Statistical analysis

SPSS version 23 software was used to evaluate the data. Descriptive statistics were given as numbers and percentages for categorical datas, and as the mean and standard deviation for the numerical datas. Shapiro-Wilk test were used for the normal distribution of the data. In addition, chi-square and non-parametric tests were used for comparisons between groups, *p* value of <0.05 was accepted as statistically significant in this study. A Mann-Whitney U test was used to analyze differences between the use of integrative medicine and Beck Hopelessness scale scores. Moreover, the Chi-square test was used in the analysis of categorical variables.

Table 1. Socio-demographic and disease characteristics for patients (n = 259).

Characteristics		
	Mean±ss	
Age (year)	67.25±9.10	
Duration of illness	8.94±7.89	
Sex	n	%
Male	166	64.1
Female	93	35.9
Marrital status		
Married	199	76.8
Single	60	23.2
Education level		
Primary school	131	50.6
Illiterate	67	25.9
Middle/High school/ University	34	13.1
Literate	27	10.4
Additional chronic disease		
Yes	139	53.7
No	120	46.3
Total	259	100

RESULTS

Socio-demographic and disease characteristics for patients are tabulated in Table 1. 64.1% of individuals are male, average age is 67.25 ± 9.10 , 76.8% are married and 50.6% are primary school graduates. In addition, the mean COPD diagnosis period for individual was found to be 8.94 ± 7.89 , 53.7% of them had additional chronic diseases (Table 1). 29.7% of individuals is used integrative medicines, 76.6% of them received information about this method, 6.5% of this information received from healthcare personnel, 63.6% of individuals used integrative medicines believed that it was useful and

72.7% of individuals used integrative medicines share any information with healthcare professional (Table 2).

29.7% of patients use integrative medicines and is the most frequently used of the herbal (66.2 %) and religious practices (19.5%) and the reason for integrative medicines usage was to control the disease/fighting against disease (90.9%), hopelessness (57.2%), as family member/close relatives suggested (49.4%) (Table 2). It was found that the hopelessness level of the group using integrative medicines is high, but the difference between the groups is not statistically significant ($p > 0.05$) (Table 3).

Table 2. Characteristics of patients regarding the use of integrative medicines

Characteristics	n	%
The use of integrative medicines		
Not used	182	70.3
Used	77	29.7
Information status about the use of integrative medicines (n=77)		
Yes	59	76.6
No	18	23.4
Thinking that integrative medicines are harmful or useful (n=77)		
Useful	49	63.6
Harmful	28	36.4
Sharing the use of integrative medicines with healthcare professionals (n=77)		
Not share	56	72.7
Share	21	27.3
From whom the integrative medicines was learned ¹		
TV, radio, magazine	48	62.3
Family member/close relatives	36	46.8
Healthcare professional	5	6.5
Type of integrative medicines (n=77)		
Herbal methods	51	66.2
Religious methods	15	19.5
Other ²	8	10.4
Breath training	2	2.6
Music therapies	1	1.3
Reasons for using integrative medicines (n=77) ¹		
Thinking control the disease /Fighting against disease	70	90.9
Hopelessness	44	57.2
Interest	40	51.9
As family member/close relatives suggested	38	49.4
Feeling better	27	35.1
Reduce pain	19	24.7
Reduce anxiety	14	18.2
Physical comfort	6	7.8

¹ More than one answer was given;

²Vapour, massage, exercise, vitamin and mineral pills, adviser a hodja

Table 3. Individuals' integrative medicines usage and distribution of Beck hopelessness scale total scores

Beck Hopelessness Scale	Feelings about the future <i>M(Q1-Q3)</i>	Loss of motivation <i>M(Q1-Q3)</i>	Hope <i>M(Q1-Q3)</i>	Total Score <i>M(Q1-Q3)</i>
The use of integrative medicines				
Used	4.0 (2.0-5.0)	5.0 (2.0-7.0)	6.0 (4.0-6.0)	15.0 (8.0-18.0)
Not used	3.0 (1.0-4.0)	4.0 (2.0-6.0)	5.0 (2.0-6.0)	11.0 (5.0-17.0)
<i>z</i>	-0.669	-0.292	-0.155	-0.206
<i>p</i>	0.504	0.770	0.877	0.837

z: Mann Whitney U test, *M*: Median, *Q1*: 25. Percentile, *Q3*: 75. Percentile

It was found that the difference between the income status and duration of diagnosis of individuals and integrative medicines usage status is statistically significant ($p < 0.05$), and there is no statistically significant difference between other variables and integrative medicines usage status ($p < 0.05$) (Table 4).

Table 4. Socio-Demographic and disease-related features of individuals and integrative medicines usages.

Characteristics	The use of integrative medicines				<i>p</i> *
	Used (<i>n</i> =77)		Not used (<i>n</i> =182)		
	<i>n</i>	%	<i>n</i>	%	
Sex					
Female	32	41.6	61	33.5	0.218
Male	45	58.4	121	66.5	
Income status					
Less than income	47	61.0	75	41.2	0.003
Equal to the expense Income	30	39.0	107	58.8	
Marrital status					
Married	62	80.5	137	75.3	0.360
Single	15	19.5	45	24.7	
Additional chronic disease					
Yes	43	55.8	96	52.7	0.648
No	34	44.2	86	47.3	
Adherence to treatment					
Adherence	69	89.6	160	87.9	0.696
Not adherence	8	10.4	22	12.1	
Age (year)					
<60	13	16.9	45	24.7	0.166
>60	64	83.1	137	75.3	
Duration of COPD (years)					
1-5 year	25	32.5	91	50.0	0.034
6-10 year	29	37.7	50	27.5	
Over 10 years	23	29.9	41	22.5	

*: Chi-square test was done; Bold *p* values are statistically significant (< 0.05).

DISCUSSION

Today, due to the increase of chronic diseases, use of integrative medicines in the treatment of diseases and methods for reducing the symptoms are increasing in Turkey and in the world³³. In patients having chronic diseases like asthma and COPD, integrative medicines usage could becoming increasingly, and it

might change with respect to geographical region and culture¹². The most commonly used integrative medicines methods in various studies in Turkey are reported to be herbal treatments^{10,34-37}. In this study, we found that 29.7% of patients use integrative medicines therapies and is the most frequently used of the herbal and religious practices. It has been concluded that the reason for the use of herbal products is cheap, easily accessible, less harmful and

reliable. We note that the prayer is included in integrative medicines in the Turkey. This results may be explained in connection with the fact that religious values like prayer has a significant place in Turkish culture and society^{38,39}. It should also be evaluated whether patients using these methods continue pharmacological treatment and whether they benefit or harm from these methods¹². In this study, we found that 89.6% of patients using the integrative medicine method have adherence to the pharmacological treatment. According to these results it can be concluded that patients use integrative methods as well as pharmacological treatment. Our results show that there was no statistically significant relationship between patients' age, gender and marital status and the use of integrative medicine. The results of this study are compatible with the previous studies^{10,11}.

Patients with COPD less than 5 years and longer than 10 years were more likely to use integrative methods than those of 6-10 years. The reason for this is that the symptoms may be milder in the early period, whereas, there may be emotions such as habituation, despair and hopelessness in the later period. The duration of disease diagnosis has an impact on integrative medicines usage as reported by Abadoğlu et al.⁴⁰. In the research, individuals with lower income levels use integrative medicines more frequently than others. Moreover, the difference between the groups was determined to be statistically significant ($p < 0.05$). Low-income individuals could prefer integrative methods due to problems such as not accessing healthcare and not paying medication/contribution fees. 63.6% of individuals used integrative medicines believe it is beneficial for them, whereas 72.7% of those not share any information with healthcare professional. Moreover, the patients stated that they got the information about the use of integrative medicines from media activities such as television, radio and magazine. We note that the life-threatening side effects can sometimes be revealed to use integrative medicines. A recent study shows that patients do not need to share their integrative medicine practices with the physician²⁵. This result emphasizes the importance of the knowledge of the health personnel regarding the use of patients' integrative medicine practices.

Healthcare professionals have a vital role in determining the integrative medicines usage status and preventing complications^{12,41,42}. Healthcare professionals should also increase their integrative

medicines knowledge and they should advise patients on the integrative medicines method³⁵. In accordance with the results of previous studies, it was confirmed that patients benefit from integrative medicines^{10,33,41,42}. However, it is stated in the literature that side effects may occur depending on the usage and dosage of herbal products^{43,44}. Arguder et al. concluded that 7.4% of patients with COPD stated that the use of integrative medicine causes undesirable side effects⁴⁵. In addition, many studies show that side effects are more intense especially in herbal methods^{43,44}.

It is reported that the use of integrative medicines in patients with chronic hepatitis B was found to be reliable by patients. However, since healthcare professionals do not ask patients any questions about the use of integrative medicines, most patients do not provide information about integrative medicines⁴⁵. As reported Toygar et al., 21.5% of individuals with cancer had knowledge about integrative medicines, and its main source was the social media and internet (54.8%)³⁵. In line with these results, it is understood the importance of the health personnel's holistic evaluation of the patient due to the fact that most of their patients receive information from media activities. In this study, it was found that the most common reasons for individuals using integrative medicines method are disease control (90.9%) and hopelessness (57.2%). Patients with diabetes stated that they used integrative medicines for reasons such as controlling blood glucose level and reducing the effect of disease⁴⁷. In similar studies in the literature, it is stated that patients used integrative medicines for reasons such as feeling good, support immune system, decreasing pain and fatigue, depression, fighting diseases^{37,42,48}. On the other hand, the results of our study show that hopelessness did not affect integrative medicines usage. There is limited study on hopelessness in the literature and these studies also support the results of our study^{37,49}. Apart from these studies, we noted that the use of massage therapy in patients with ovarian cancer decreases hopelessness⁵⁰. These results show that a detailed medical history was taken to investigate the causes of the use of integrative medicine in COPD patients. The reasons for integrative medicine can be determined and it is recommended to prepare appropriate treatment and education programs for the patient.

In this study, we found that 29.7% of patients use integrative medicines therapies and is the most

frequently used of the herbal treatments and religious practices, and 63.6% of those believed in integrative medicines efficacy. The reasons for the use of integrative medicines therapies are symptom management, hopelessness and curiosity, whereas 72.7% of patients used integrative medicines therapies share any information with healthcare professional. It was determined that the duration of diagnosis and age affect integrative medicines usage, but the level of hopelessness does not affect integrative medicines usage.

In this study, it restricted us to examine the long-term results of integrative medicines usage due to the cross-sectional design and the use of questionnaires. In addition, these results are not generalized to all COPD patients, since the study was conducted in a single center.

It is recommended that the healthcare professional should obtain detailed information about the integrative medicines from patients. It can be suggested that the randomized controlled experimental studies should be conducted to determine the relationship between integrative medicines usage and hopelessness.

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