Research Psikiyatride Güncel Yaklaşımlar-Current Approaches in Psychiatry 2024; 16(Suppl 1):152-161
doi: 10.18863/pgy.1452404

Spiritual Well-Being Levels, Severity of Disease and Mental Health Status of Individuals with Chronic Obstructive Pulmonary Disease

Kronik Obstrüktif Akciğer Hastalığı Olan Bireylerin Manevi İyi Oluş Düzeyleri, Hastalık Şiddeti ve Ruhsal Durumları

Özlem Şahin Altun[1], Duygu Özer[2], Muhammed Furkan Parlak[3]

[1]Atatürk University, Erzurum
[2]Bartın University, Bartın
[3]Van Training and Research Hospital, Van

ABSTRACT

Objective: The aim of this study was to examine the effect of spiritual well-being levels on disease severity, depression, anxiety and stress levels of individuals diagnosed with Chronic Obstructive Pulmonary Disease (COPD).

Method: This descriptive study was carried out with 192 individuals diagnosed with COPD who were treated in the chest disease service of a training and research hospital between April and December 2022. Data was obtained using the Spiritual Well-Being Scale (FACIT-Sp-12), COPD Assessment Test (CAT) and the Depression Anxiety Stress Scale (DASS-21).

Results: Among all patients, 82.3% of the individuals experienced depression, 57.3% anxiety and 79.2% stress symptoms. There was a very weakly negative correlation between the mean FACIT-Sp-12 total score and the mean CAT total score, a moderately negative correlation between the mean FACIT-Sp-12 total score and the mean DASS-21 total score, and a weakly positive correlation between the mean CAT total score and the mean DASS-21 total score. Spiritual well-being was found to predict severity of illness by 0.48%, depression levels by 41.2%, anxiety levels by 0.56% and stress levels by 20.4%.

Conclusion: Holistic care should be provided to COPD patients, considering the positive effect of spirituality on disease severity and mental states during the treatment and care process of the patient.

Keywords: Chronic obstructive pulmonary disease, spiritual well-being, mental health, symptom

ÖZ

Amaç: Bu çalışmanın amacı Kronik Obstrüktif Akciğer Hastalığı (KOAH) tanılı bireylerin manevi iyi oluş düzeylerinin hastalık şiddeti, depresyon, anksiyete ve stres belirtileri düzeyleri üzerindeki etkisini incelemektir.

Yöntem: Tanımlayıcı tipteki bu çalışma, Nisan-Aralık 2022 tarihleri arasında bir eğitim ve araştırma hastanesinin göğüs hastalıkları servisinde tedavi gören KOAH tanılı 192 birey ile gerçekleştirildi. Veriler Manevi İyi Oluş Ölçeği (FACIT-Sp-12), KOAH Değerlendirme Testi (CAT) ve Depresyon Anksiyete Stres Ölçeği (DASS-21) kullanılarak elde edildi.

Bulgular: Bireylerin %82,3'ünde depresyon, %57,3'ünde anksiyete ve %79,2'sinde stres belirtileri yaşandığı belirlendi. FACIT-Sp-12 toplam puanı ile CAT toplam puanı arasında çok zayıf düzeyde negatif yönlü korelasyon, FACIT-Sp-12 toplam puanı ile ortalama DASS-21 toplam puanı arasında orta derecede negatif yönlü korelasyon, CAT toplam puanı ile ortalama DASS-21 toplam puanı arasında zayıf düzeyde pozitif yönlü korelasyon olduğu bulundu. Manevi iyi oluşun hastalık şiddetini %0,48, depresyon düzeylerini %41,2, anksiyete düzeylerini %0,56 ve stres düzeylerini %20,4 oranında yordayıcı etkisi olduğu belirlendi.

Sonuç: KOAH tanılı bireylere, tedavi ve bakım sürecinde maneviyatın hastalık şiddeti ve ruhsal durumları üzerindeki olumlu etkisi göz önünde bulundurularak bütüncül bakım sağlanmalıdır.

Anahtar sözcükler: Kronik obstrüktif akciğer hastalığı, manevi iyi oluş, ruh sağlığı, semptom

Address for Correspondence: Duygu Özer, Bartın University Faculty of Health Sciences Department of Psychiatric Nursing, Bartın, Türkiye **E-mail:** duyguozer2016@hotmail.com
Received: 14.03.2024 | **Accepted:** 04.07.2024

Introduction

Chronic Obstructive Pulmonary Disease (COPD) is a severe and chronic disease that causes severe respiratory distress with cough, sputum and progressive airflow obstruction. COPD is the third leading cause of death in the world and causes more than three million deaths annually (Adeloye et al. 2015, WHO 2023). With increasing air pollution, smoking rates and population aging, it is estimated that the prevalence of COPD will increase in the coming years and that by 2060 there will be more than 5.4 million deaths annually due to COPD-related conditions (Rosenberg et al. 2015, Aldan et al. 2022).

COPD is a disease that restricts the mobility of individuals, and severely reduces daily life activities and quality of life, besides symptoms such as difficulty in breathing, coughing and sputum production (Chouseınoglou 2018, Aldan et al. 2022). In the progressive stages of the disease, it is observed that the person can no longer be separated from oxygen therapy and tries to survive dependent on someone else. In the face of these challenging situations brought about by the disease, individuals' concerns about the future increase and cause them to experience high levels of hopelessness, depression and anxiety (Sinha et al. 2017, Aldan et al. 2022, Mourya et al. 2022). It has been reported that these mental problems also hurt the physical health of the individual and increase the frequency of exacerbations and hospitalization rates (Marvel et al. 2016, Sinha et al. 2017, Mourya et al. 2022). Physical and mental problems seem to affect each other bidirectionally. Therefore, developing holistic approaches to individuals diagnosed with COPD and supporting them mentally will positively affect their severity of illness and quality of life (Balboni et al. 2014, Helvaci et al. 2020).

The Global Initiative for Chronic Obstructive Lung Disease (GOLD) recommends emotional and spiritual support for individuals with COPD and their families in palliative care (Gergianaki et al. 2019). In addition, it is stated in the literature that spirituality is an effective tool for coping with difficulties (Hawthorne and Gordon 2020). However, it is reported that spirituality is ignored by health professionals compared to other areas and that they do not include the spiritual needs of patients in their clinical routines (Balboni et al. 2014, Gergianaki et al. 2019). There are studies on spirituality levels with various patient groups such as individuals diagnosed with cancer (Levine et al. 2009), individuals with chronic kidney disease (Vitorino et al. 2018) and individuals with cardiovascular disease (Trevino and McConnell 2015). In these studies, it is stated that individuals with high spirituality have higher life satisfaction, happiness and hope levels, lower feelings of helplessness and depression levels, and accordingly, their disease prognosis and quality of life are positively affected (Levine et al. 2009, Trevino and McConnell 2015, Vitorino et al. 2018). These findings suggest that spirituality's impact on managing chronic diseases needs to be carefully considered.

Considering that spiritual values are higher and more important in a Muslim country like Türkiye (Helvacı et al. 2021), it becomes more important to evaluate what role this plays in managing chronic diseases. Individuals can protect their mental and physical health by drawing strength from their spiritual values to cope with the difficulties they live with. In this study, the effect of spiritual well-being levels of individuals diagnosed with COPD on both disease severity and mental states will be examined. Since there is a limited number of studies on this subject in literature, this study will provide important and up-to-date data. In addition, it will draw attention to the need to provide holistic care by considering spiritual values in nursing care.

Method

Sample

The study population consisted of 235 individuals diagnosed with COPD in GOLD I, II, III, IV stages who were hospitalized in the chest diseases department of the hospital between April and December 2022. Power analysis was performed in G*Power 3.1.9.4 program to determine the sample size. Based on the study conducted by Koç (2023), the minimum number of individuals to be included in the sample was determined as 147 with 95% confidence interval and 5% margin of error. The study was finalized with 192 participants. Inclusion criteria were being diagnosed with COPD according to GOLD criteria, having a medical condition that would not prevent clinical interviews (no severe cough, shortness of breath, inability to speak), and being willing to participate in the study. Exclusion criteria were not diagnosed with COPD, having a medical condition that would prevent clinical interviews (severe cough, shortness of breath, inability to speak) and not willing to participate in the study.

Procedure

In this study, the researchers stated that they complied with the Declaration of Helsinki. Before starting the

study, the necessary permissions were obtained from the ethics committee of Atatürk University the Ethics Committee of Nursing Faculty (number: 2022-2/2, date: 25.02.2022) before the study was conducted and institutional permission from the managers of the institution and clinic where the study was to be conducted. The researchers explained the purpose of the study and obtained written and verbal informed consent from all individuals. The study was conducted by the Personal Data Protection Law.

This descriptive study was conducted on individuals diagnosed with COPD hospitalized in the chest disease service of a training and research hospital in the Eastern Anatolia Region of Türkiye between April and December 2022. The study was conducted in an 82-bed chest diseases clinic of a training and research hospital. There are 11 specialist doctors and 36 nurses working in the clinic. The data were collected by the researcher (MFP) working as a nurse in the clinic.

The researcher conducted face-to-face interviews with each patient in a private interview room for approximately 30 minutes and the answers given by the individuals during the interview were recorded in the questionnaires by the researcher. Data were collected in this study using the Sociodemographic Form, Spiritual Well-Being Scale (FACIT-Sp-12), The COPD Assessment Test (CAT), and Depression Anxiety Stress Scale (DASS-21).

Measures

Sociodemographic Form

The form includes 13 items questioning the patients' sociodemographic (age, gender, education status etc.) and health-related characteristics (COPD diagnosis duration, GOLD stage, the status of receiving oxygen therapy etc.) and was prepared by the researchers as a result of a literature review (Hasegawa et al. 2017, Helvaci et al. 2020, Aldan et al. 2022).

Spiritual Well-Being Scale (FACIT-Sp-12)

The scale designed by Peterman et al. (2014) to determine the spiritual well-being levels of individuals includes 12 items. This scale was translated into Turkish by Ay et al. (2018) to determine the spiritual well-being of individuals with cancer or other chronic diseases. The scale with 3 sub-scales (peace, meaning, and faith) helps to research all components of spiritual well-being in depth. The total scale score ranges from 0-48 points. The scale has no cut-off point, and a higher scale score indicates better spiritual well-being. While Cronbach's alpha value of the scale was determined to be 0.80 in the study of Ay et al. (2018), Cronbach's alpha value was determined to be 0.74 in this study.

COPD Assessment Test (CAT)

The scale designed by Jones et al. (2009) evaluates patients' symptoms such as respiratory distress, fatigue, and sleep status. It consists of a total of 8 questions and patients rate their symptoms on a 0–5-point scale for each question. The total score varies between 0-40. 0-10 points are interpreted as low disease severity, 11-20 points as moderate disease severity, 21-30 points as high disease severity, and 31-40 points as very high disease severity (Jones et al. 2009). The Turkish reliability validation of the scale was conducted by Yorgancıoğlu et al. (2012) and Cronbach's alpha value was determined to be 0.88. In this study, Cronbach's alpha value was determined as 0.85.

Depression Anxiety Stress Scale (DASS-21)

The scale designed by Lovibond et al. (1995) to measure depression, anxiety and stress levels of individuals has 42 items. It was transformed into a 21-question short form by Henry and Crawford (2005). The Turkish adaptation, validity and reliability study of the scale was carried out by Sarıçam (2018). The scale, which consists of 21 items in total, has 3 subscales. The 4-point Likert-type scale is scored between 0 (Never) and 3 (Always). It has been reported that individuals who scored five points or more on the depression sub-dimension, four points on the anxiety sub-dimension, and eight points or more on the stress sub-dimension have a related problem. In Sarıçam's study (2018), Cronbach's alpha value of the scale was 0.87, in this study, Cronbach's alpha value was 0.88.

Statistical Analysis

Data were analyzed using IBM SPSS Statistics for Windows, v.27 software. In the analysis of the descriptive data, numbers, percentages, mean, standard deviation, and minimum and maximum values were used. For the normal

distribution of the data in the study, skewness and kurtosis values between ±2 was considered normal (George and Mallery 2010). ANOVA and Student's t-test were used in comparisons of scale items, Pearson correlation analysis and Simple Linear regression analysis were used to evaluate the relationship between the scales. The regression analysis evaluated the effect of patients' spiritual well-being levels on disease severity and depression, anxiety and stress levels and a model were created accordingly. In the model, the effect of the FACIT-Sp-12 total score on CAT total, DASS total and subscales were examined separately. In this context, CAT total, DASS total and subscale scores were taken as the dependent variable and FACIT-Sp-12 total score was taken as the independent variable.

Table 1. Distribution of patient characteristics (n=192)		
Characteristic	**Min-Max**	**X(*SD*)**
Age (years)	30-100	67.74(10.66)
COPD diagnosis duration (year)	1-65	9.47(9.27)
Number of COPD attacks in the past year	1-35	6.15(6.13)
Number of emergency visits for COPD in the past year	1-20	3.57(3.36)
	Number	%
Age range(years)		
30-50	11	5.7
51-65	68	35.4
65-80	93	48.4
81+	20	10.4
Gender		
Female	93	48.4
Male	99	51.6
Employment status		
Working	6	3.1
Not working	186	96.9
COPD diagnosis duration (year)		
1-2 year	28	14.6
3-5 year	62	32.3
6-10 year	39	20.3
11-15 year	29	15.1
16-20 year	20	10.4
21+	14	7.3
GOLD Stage		
I. Stage	29	15.1
II. Stage	107	55.7
III. Stage	45	23.4
IV. Stage	11	5.7
The status of receiving oxygen therapy		
Never use	12	6.3
Sometimes	79	41.1
Always using	101	52.6
Smoking status		
Never smoked	67	34.9
Current Smoker	37	19.3
Ex-smoker	88	45.8
A chronic disease other than COPD		
Yes	146	76.0
No	46	24.0

X=Mean, SD=Standard Deviation; COPD= Chronic Obstructive Pulmonary Disease

Results

The mean age of the individuals were 67.74 (10.66) years, 51.6% of them were male, and 96.9% of them were not working at any job. It was also found that the participants were diagnosed with COPD 9.47 (9.27) years ago, the mean number of COPD attacks in the last year was 6.15 (6.13), 55.7% of them were in GOLD stage II, 52.6% of them received continuous oxygen therapy, and 45.8% of them were former smokers (Table 1).

The mean scale scores of the individuals are shown in Table 2. While 45.8% of the individuals were found to have a very high level of severity of illness, 82.3% of them experienced depression, 57.3% of them experienced anxiety and 79.2% of them experienced stress (Table 2).

Table 2. Mean FACIT-Sp-12, CAT and DASS scores and distribution of patients according to scale cut-off points (n=192)			
Scales		**Min-Max**	**X±*SD***
FACIT-Sp-12	Meaning	0-15	6.67±2.47
	Peace	0-14	6.76±2.66
	Faith	0-16	10.47±3.71
	Total	5-45	23.90±6.95
CAT	Total	8-40	29.20±6.88
DASS	Depression	1-21	13.56 ±4.71
	Anxiety	2-21	11.85±3.92
	Stress	2-21	9.54±3.56
	Total	6-60	34.97±10.23
		Number	%
CAT	Mild (0-10)	1	.5
	Moderate (11-20)	17	8.9
	Severe (21-30)	86	44.8
	Extremely Severe (31-40)	88	45.8
DASS	No depression (0-4)	34	17.7
	Depression (≥5)	158	82.3
	No anxiety (0-3)	82	42.7
	Anxiety (≥4)	110	57.3
	No stress (0-7)	40	20.8
	Stress (≥8)	152	79.2

X=Mean, SD=Standard Deviation, FACIT-Sp-12=Spiritual Well-Being Scale, CAT=COPD Assessment Test, DASS=Depression Anxiety Stress Scale

When the characteristics of the participants in this study were compared with the mean scores of the scale, a statistically significant difference was determined between the groups in terms of FACIT-Sp-12 total mean score, gender and oxygen therapy status ($p<0.05$). It was found that women had lower levels of spiritual well-being than men, those who received continuous oxygen therapy had lower levels of spiritual well-being than those who never received oxygen therapy. There was a statistically significant difference between the groups in terms of CAT total mean score, GOLD stage and oxygen therapy status ($p<0.05$). It was observed that the disease severity levels of the participants in GOLD stage I-II were lower than those in GOLD stage III, and the disease severity levels of those who received continuous oxygen therapy were higher than those who never received oxygen therapy. There was a positive and weakly significant relationship between the year of COPD diagnosis, the number of COPD attacks in the last year, the number of emergency room visits and the mean CAT total score. A statistically significant difference was found between the mean DASS-21 total score and gender and GOLD stage groups ($p<0.05$). It was observed that depression, anxiety and stress levels in men were lower than in women and participants in GOLD stage I were lower than those in GOLD stage IV. There was a very weakly significant positive correlation between age and the number of visits to the emergency department due to COPD in the last year and the mean DASS-21 total score ($p<0.05$) (Table 3).

It was determined that there was a negative and very weak significant relationship between the mean FACIT-Sp-12 total scores and the mean CAT total scores of the participants. There was a moderately significant negative correlation between FACIT-Sp-12 total mean scores and DASS-21 depression subscale and total mean scores, while a weakly significant negative correlation was determined between FACIT-Sp-12 total mean scores and DASS anxiety and stress subscales ($p<0.001$). In addition, a weakly significant positive correlation was observed between the mean CAT total score as well as the mean DASS-21 subscales and total score ($p<0.001$) (Table 4). In the simple linear regression analysis, it was determined that the mean FACIT-Sp-12 total score was found to predict 0.48% on the mean CAT total score, 30.1% on the mean DASS-21 total score and 41.2% on the DASS-21 depression subscale. It was also observed that the CAT total score predicted DASS-21 total score by 24.3%, on DASS-21 depression sub-dimension by 22%, the DASS-21 anxiety sub-dimension by 13.8%, and on DASS-21 stress sub-dimension by 14.7% (Table 4).

Table 3. Comparison of the mean scores the patients obtained from the FACIT-Sp-12, CAT and DASS in terms of their characteristics

Characteristic	**n**	**FACIT-Sp-12 Total**	**CAT Total**	**DASS Total**
		X±*SD*	X±*SD*	X±*SD*
Gender				
Female	93	22.73±5.88	29.23±7.31	37.62±10.01
Male	99	25.01±7.70	29.18±6.49	34.36±10.44
Test statistics	t	2.293	.055	1.854
	p	.020	.965	.047
GOLD Stage				
I. Stage[a]	29	25.00±7.58	26.41±7.71	32.62±10.44
II. Stage[b]	107	23.71±6.96	28.22±6.47	34.71±9.81
III. Stage[c]	45	24.42±6.74	32.66±6.20	36.33±11.70
IV. Stage[d]	11	20.81±5.82	32.00±5.34	38.09±5.83
Test statistics	F	1.073	7.383	6.141
	p	.362	.000	.034
			a,b<c	a<d
The status of receiving oxygen therapy				
Never use[a]	12	28.41±7.32	26.50±8.37	29.66±8.75
Sometimes[b]	79	23.62±6.86	27.48±6.84	35.48±9.54
Always using[c]	101	23.50±6.87	30.88±6.33	35.20±10.81
Test statistics	F	3.716	6.785	1.751
	p	.042	.000	.176
		c<a	a<c	
Smoking status				
Never smoked	67	23.83±6.47	29.61±7.37	35.38±10.54
Current Smoker	37	23.16±6.69	28.7±6.56	35.86±9.68
Ex-smoker	88	24.27±7.45	29.10±6.69	34.28±10.27
Test statistics	F	.335	.212	.393
	p	.716	.808	.652
A chronic disease other than COPD				
Yes	146	23.84±6.46	29.12±7.08	34.41±10.27
No	46	24.08±8.40	29.47±6.27	36.73±9.98
Test statistics	t	.020	-.304	.565
	p	.841	.761	.180
Age (years)	r	.049	-.018	.140*
	p	.498	.809	.043
COPD diagnosis duration (year)	r	-.029	.152*	.005
	p	.687	.048	.948
Number of COPD attacks in the past year	r	.006	.224**	.107
	p	.932	.002	.139
Number of emergency visits for COPD in the past year	r	.022	.187*	.144*
	p	.758	.009	.047

FACIT-Sp-12=Spiritual Well-Being Scale, CAT=COPD Assessment Test, DASS=Depression Anxiety Stress Scale, t=Student's test, F=ANOVA, r=Pearson correlation, **Correlation is significant at the 0.01 level (2-tailed) *Correlation is significant at the 0.05 level (2-tailed).

Table 4. The scales of FACIT-Sp-12, CAT and DASS in regression and correlation analysis										
		Regression analysis							**Correlation analysis**	
IV	DV	*B*	*SE*	*ß*	R^2	*t*	*F*	*p*	*r*	*p*
FACIT-Sp-12 Total	CAT Total	-.217	.070	-.219	.048	-3.095	9.579	.002	-.219**	.000
	DASS Total	-.812	.089	-.552	.305	-9.121	83.186	.000	-.552**	.000
	Depression	-.436	.038	-.642	.412	-11.546	133.314	.000	-.642**	.000
	Anxiety	-.121	.036	-.236	.056	-3.347	11.199	.001	-.236**	.000
	Stress	-.255	.037	-.451	.204	-6.970	48.517	.000	-.451**	.000
CAT Total	DASS Total	.733	.094	.493	.243	7.814	61.015	.000	.493**	.000
	Depression	.322	.044	.469	.220	7.325	53.569	.000	.469**	.000
	Anxiety	.191	.035	.371	.138	5.510	30.361	.000	.371**	.000
	Stress	.219	.038	.383	.147	5.714	32.653	.000	.383**	.000

FACIT-Sp-12=Spiritual Well-Being Scale, CAT=COPD Assessment Test, DASS=Depression Anxiety Stress Scale, r=Pearson correlation, **Correlation is significant at the 0.01 level (2-tailed); IV: Independent variable; DV: Depndent variable

Discussion

In recent years, research on the concept of spiritual well-being in COPD patients has gained momentum. Therefore, the effects of spiritual well-being in individuals with COPD have only recently begun to be understood. In this study, the effects of spiritual well-being levels of COPD patients on disease severity, depression, anxiety, and stress levels are examined. Studies have reported that religiosity, social and cultural factors can affect spiritual well-being (Eckersley 2007, Koenig 2015). The mean spiritual well-being score of COPD patients participating in this study was 23.9 (6.95), which is lower than other studies. In a study performed with COPD patients in Japan, the mean score of spiritual well-being was determined to be 27.0 (Hasegawa et al. 2017), in a study performed in Brazil, the mean score of spiritual well-being was determined to be 38.0 (Mendes et al. 2022), and in a study performed in Türkiye, it was determined to be 34.5 (7.4) (Helvacı et al. 2020). While it was expected that spirituality would be high in this study, it was surprising that it was low compared to national and international studies. Considering the results of previous studies, the difference between spiritual well-being scores may be due to differences in culture and religious beliefs. In addition, it is thought that the characteristics of the patients participating in this study may also affect the findings.

When the characteristics affecting the spiritual well-being of the patients were examined, it was found that the spiritual well-being of women was lower than that of men. In contrast to this study, studies conducted with COVID-19 patients (Rababa et al. 2021, Şahin Altun et al. 2022), determined that women had higher levels of spirituality and lower levels of psychological well-being. These results suggest that spirituality is a protective role in mental health. In addition, it is emphasized that women are in the risky group in terms of mental disorders (Rababa et al. 2021). When a disease that negatively affects all areas of life of women is added to it, it may be inevitable that mental problems may arise, and their spiritual well-being may be negatively affected. For this reason, it can be said that spiritual interventions should be implemented while caring for female COPD patients, thus strengthening women's spiritual well-being and reducing their mental problems. In addition, studies have reported that patients in the advanced stage of the disease have higher spiritual levels (Hasegawa et al. 2017), on the other hand, it has also been reported that the level of spiritual well-being is significantly higher in patients with mild airflow limitation and fewer exacerbations (Helvacı et al. 2020). In the present study, it was observed that patients who never received oxygen had higher levels of spiritual well-being than patients who received continuous oxygen therapy. The frequency of receiving oxygen therapy is associated with disease burden (Hasegawa et al. 2017), and it is understood that patients who never received oxygen had less disease burden. Considering that disease burden and spirituality are inversely related (Helvacı et al. 2020), this is an expected situation.

Individuals with COPD in this study were determined to have a high level of disease severity. According to this finding, it is understood that COPD has a great impact on the daily lives of the individuals in this study and affects them seriously. Furthermore, in this study, it was determined that the severity of illness was higher in patients who were in GOLD stage 3, who received continuous oxygen therapy, and that the severity of illness increased as the year of COPD diagnosis, the number of COPD attacks in the last year and the number of emergency room visits increased. These findings are like each other and are physiologically expected. These

findings are also similar to the literature (Christensen et al. 2016, Miravitlles and Ribera 2017, Carvalho et al. 2018, Ding et al. 2018).

It has been reported that COPD patients are at risk for mental problems (Sinha et al. 2017, Gergianaki et al. 2019). In this study, it was observed that most of the COPD patients had symptoms of depression, anxiety, and stress and that they experienced depressive symptoms the most from the mean scores. In previous studies, it has been reported that patients with COPD experience anxiety and depression more than healthy control groups (Lou et al. 2012, Wong et al. 2014, Matte et al. 2016). Pumar et al. (2014) reported that the prevalence of depression in COPD patients ranged between 10-57% and the prevalence of anxiety ranged between 7-50%. It has been reported that mental problems in COPD increase with increasing severity of the disease, increasing number of attacks, and receiving continuous oxygen therapy (Pumar et al. 2014, Matte et al. 2016). In present study, similar results were obtained with the literature, and it was observed that depression, anxiety and stress levels were higher in individuals with advanced disease stage, who frequently applied to the emergency department due to COPD attacks and who received continuous oxygen therapy. It was also found that female COPD patients had high levels of depression, anxiety, and stress. For this reason, it is understood that women, patients with advanced disease severity and patients who show a negative prognosis with frequent attacks should be followed closely in terms of mental health. In addition, as in this study, physical and cognitive losses in the aging process may be a factor that increases mental problems (Lou et al. 2012). Therefore, multicenter, large-sample studies can be conducted by evaluating the effect of cognitive levels of elderly individuals diagnosed with COPD on their mental status.

Spiritual well-being is a good way to cope with difficulties. It has been reported that spiritual well-being has positive effects on individuals during the disease process (Gergianaki et al. 2019, Hawthorne and Gordon 2020). In this study, it was found that participants with high levels of spiritual well-being had lower disease severity, depression, anxiety and stress levels. In studies conducted on this subject, it has been reported that spirituality increases physical functionality (da Silva et al. 2009, Mendes et al. 2022) and quality of life (Delgado 2007), reduces disease severity (Hasegawa et al. 2017, da Silva et al. 2018, Helvacı et al. 2020), increases psychological resilience and self-management (Chen et al. 2021), increases treatment compliance (Alvarez et al. 2016, Helvacı et al. 2020) and decreases depression, anxiety and hopelessness levels (Sinha et al. 2017, Gergianaki et al. 2019, Mourya et al. 2022). Religious and spiritual practices (such as prayer and meditation) are reported to produce positive emotions such as forgiveness and hope, and improve problems such as guilt, hopelessness and stigmatization (Halding et al. 2011, Gergianaki et al. 2019). It is even mentioned that it may have physiological effects such as regulating blood pressure/heart rate and reducing oxygen consumption (Miller et al. 2019). The results of this study also support the literature, and spiritual well-being was found to reduce disease severity and mental problems.

The limitation of this study is that it was applied to a limited group of individuals diagnosed with COPD hospitalized in the chest diseases ward of a hospital. Thus, the results of the study can only be generalized to this study group. The individuals in this study were mostly over the age of 65, and a measurement tool to assess their cognitive functions could have been used. The data collected from the study are limited to the scales used and the self-reports of the individuals.

Conclusion

COPD patients with high levels of spiritual well-being had lower disease severity, depression, anxiety, and stress levels. Holistic care should be provided by considering the positive effect of spirituality on disease severity and mental states during the treatment and care process of the patient. It can be said that nurses should give individualized care to patients without judging their spiritual values, beliefs, and religions. In addition, it was observed that female patients, patients in the advanced stage of the disease, and patients with a high number of exacerbations and therefore frequent emergency room visits were in the risky group in terms of the disease process and mental problems. These patient groups should be assessed in more detail in terms of mental disorders and regular screenings should be performed. In addition, spirituality, which remains in the background of nursing care, should be emphasized in basic nursing education and in-service training given in hospitals.

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Authors Contributions: The author(s) have declared that they have made a significant scientific contribution to the study and have assisted in the preparation or revision of the manuscript

Peer-review: Externally peer-reviewed.

Conflict of Interest: No conflict of interest was declared.

Financial Disclosure: No financial support was declared for this study.