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Research Article

MORAL AND SOCIAL SUPPORT STATUSES AND DEPRESSIVE SYMPTOMS OF PATIENTS AGED 65 AND OVER WHO HAVE CHRONIC OBSTRUCTIVE LUNG DISEASE

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Abstract: *The current study was undertaken to determine the status of morale, social support, and depressive symptoms among patients aged ≥ 65 years old with chronic obstructive pulmonary disease. This study was conducted in a descriptive and correlational design. The data were collected using patient descriptive forms developed by the researchers, a personal information form about the disease, Philadelphia Geriatric Center Morale Scale, the Multidimensional Scale of Perceived Social Support, and Geriatric Depression Scale through face-to-face interview method. For the analyses of the data; percentages, means, Mann Whitney U, Kruskall Wallis, and Correlation Analyses tests were employed. The rate of patients currently smoking was 6.2% whereas the rate of patients previously smoking was 60.6%. It was found that 50.9% of the elderly COPD patients had severe depression and their average depression score was 13.76±5.02, their average morale score was 5.78±2.11 and their average social support score was 54.71±16.80. It was found that there was a negative and significant correlation between morale and social support status of the elders whereas there was no correlation between morale and depression symptoms. It was identified that elderly COPD patients had lower morale status, moderate social support status, and more than half of them demonstrated depressive symptoms. While the morale levels of the patients decreased, their social support status increased. It is recommended that sufficient support systems should be provided to the elders to reduce their depression symptoms and to elevate their morale levels.*

Keywords: *Elderly, Morale, Social support, Depression, Nursing*

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1. Introduction

One of the most significant consequences of the scientific and technological developments of our time is the prolongation of human life [1]. Factors such as rising education and income levels, changing eating habits, and control of contagious diseases have led to an increase in life expectancy causing the older population to grow larger compared to the child population. This resulted in a shift in public health problems from childhood diseases to Non-Communicable Diseases (NCD) seen in the older population [2]. From these diseases, respiratory system diseases are among the most frequently seen diseases in the elderly. As one of the respiratory system diseases, Chronic Obstructive Pulmonary Disease (COPD) occurs more often either towards the end of middle age or in old age. The risk of COPD is reported to increase approximately twofold every decade after the age of 40 reaching its peak prevalence after the age of 70 [3]. The worldwide prevalence of COPD in the 20th Century is estimated to be between 4 and 20% [4].

Chronic diseases are on the rise in our country due to the aging population and changing lifestyles.2 A large majority of chronic respiratory system diseases (65%) comprises chronic airway diseases (asthma, COPD) [5]. According to the causes of death statistics of the Turkish Statistical

Institute (TSI) for 2014, from the first six diseases that cause death in Turkey, the respiratory system diseases come in third place with 10.7%2 and COPD was responsible for 61.5% of these deaths [6]. COPD is one of the most frequently seen diseases in older people [7].

Morale is an important concept that affects individuals' social support levels and depression. The Turkish Language Association defines morale as "a person's spiritual strength, spiritual strength, spirituality" [8]. The morale of the elderly is affected by many situations including diseases, depression, and social support. A low level of morale is an independent determinant of mortality in older people [9] and depression may lead to sadness and other emotional problems [10]. In a study made in Switzerland to investigate the factors affecting the morale of people aged over 85 years, absence of depression symptoms, living in an ordinary home rather than a nursing home, not feeling lonely, engaging in social activities, and perceiving their health as excellent were found to be the factors that keep their morale high [11]. Another study found that the presence of chronic disease, social support level, religious beliefs, and personal characteristics affected morale [12].

COPD is a physical disease with social consequences that necessitate the individual to make changes in their daily activities and lifestyle. COPD has significant adverse effects on the person's social interaction and social acceptance [13]. Morale cannot be sustained only with the feelings that arise in the patient but is largely affected by the social support to be received from his/her family and friends. In a study made with patients with COPD, the patients' perceived family support scores were found higher than their perceived friend support scores [14]. Another study found that patients experienced mostly depression symptoms, there was a negative correlation between depression and social support, and patients aged 65 and over had lower levels of social support [15]. Aslantaş et al. (2010) found in their study with inpatients that the perceived social support score decreased as the level of hopelessness went up in the patients. In their study also with inpatients, Sarı et al. (2011) found the perceived social support of the patients was a little above the moderate level [16,17].

COPD is a disease with systemic effects. One of the main comorbid conditions that become more apparent especially in the advanced stages of the disease is depression [2,5]. Comorbid diseases have negative impacts on the severity and prognosis of COPD particularly in older patients [2]. Biological, psychological, and social changes make older people frailer, and old age becomes a period when various problems and diseases occur more frequently. Encountered in all age groups, depression is a major psychiatric illness that leads to losses in the areas of health and works if not treated. The prevalence of major depression in the elderly is reported to be around 3%. However, it is also reported that the prevalence of subthreshold depression is 15% and the prevalence of depression symptoms is as high as 60% especially in nursing homes, hospitals, and other entities giving long-term care [18]. In a study made with subjects with COPD, Havlucu (2007) found that there were depression symptoms in 84.2% of the subjects [19].

In people aged 65 and over, the occurrence of problems related to the respiratory system is easy, but the care and treatment of them are difficult [20]. Patients whose hope and morale are high and social support is sufficient are predicted to adapt better to their diseases and have a better quality of life [21]. It is a major responsibility of nurses to provide moral and social support to patients with COPD. Nurses can keep the morale and social support levels of patients high and minimize their depression levels by recognizing their depression symptoms better. Considering the foregoing arguments, this study was conducted to reveal the moral and social support statuses and depression symptoms of people aged 65 and over who have Chronic Obstructive Pulmonary Disease.

2. Material and Methods

Conducted in a descriptive and correlational design, this study had a population consisting of old people aged 65 and over who had Chronic Obstructive Pulmonary Disease (COPD) and were being

treated as inpatients in two hospitals in Erzincan and Kırşehir between March and November 2016. Sample selection was not made for this study; 340 older patients who were open to communication, volunteered to take part in the study, and had no psychiatric problems were included. The data were collected by way of face-to-face interviews using a descriptive characteristics form prepared by the investigators, which included the descriptive characteristics of the patients and information on their disease, the Philadelphia Geriatric Center Morale Scale (PGCMS), the Multidimensional Scale of Perceived Social Support (MSPSS) and the Geriatric Depression Scale (GDS). Completion of the forms took approximately 25-30 minutes.

2.1. Data Collection Tools

Descriptive Characteristics Form: Consisted of a total of 13 questions about the socio-demographic and disease-related characteristics of the patients (age, gender, marital status, education, perceived income status, duration of disease, presence of any other diseases, perceived health, smoking, etc.).

Philadelphia Geriatric Center Morale Scale (PGCMS): The Philadelphia Geriatric Center Morale Scale (PGCMS) was developed in 1972 by Lawton to assess the morale of older individuals [22]. Pınar and Öz (2011) tested the scale for validity and reliability in our country [23]. The scale has 3 subscales; agitation, attitude toward own aging, and lonely dissatisfaction. Fifteen items in the scale involve yes/no options and one item in the attitude toward own aging section and another in the lonely dissatisfaction section involves a two-choice answer. The scale is scored by giving 1 point the 'no' answers and 0 points to the 'yes' answers to the 6 questions in the agitation section. The 'no' answers given to the first 3 questions in the attitude toward own aging section receive 1 point and 'yes' answers 0 points and the 'better' answer to the 4th question in this section receive 1 point and 'worse' answer 0 points, whereas the 5th and the last question in this section is scored 1 if the answer is 'yes' and 0 if it is 'no'. The 'not much' answer to the first question, the 'yes' answers to the 2nd and 5th questions, and the 'no' answers to the 3rd, 4th, and 6th questions are given 1 point in the lonely dissatisfaction section. The total morale score ranges between 0 and 15, with higher scores indicating better morale. The alpha value was found as 0.92 in the study of Pınar and Öz [23] and 0.87 in the present study.

Multidimensional Scale of Perceived Social Support: Developed by Zimet et al. (1988), the Multidimensional Scale of Perceived Social Support (MSPSS) assesses the level of social support perceived by individuals [24]. The 12-item scale subjectively evaluates the sufficiency of social support received from three different sources; family (items 3, 4, 8, and 11), friends (items 6, 7, 9, and 12), and significant other (items 1, 2, 5 and 10). The total score of the scale is found by adding up the subscale scores. Each item is rated using a 7-interval scale with Likert-type scoring. The subscale scores range between 4 and 28, and the total score of the scale is between 12 and 84. Higher scores obtained indicate a higher level of perceived social support. The scale was adapted to Turkish and tested for validity and reliability by Eker and Arkar (1995) on normal and ill groups. The reliability of the scale was assessed by way of Cronbach's alpha method using 5 groups; students presenting to the university health center, healthy university students, visitors coming to the hospital, and psychiatric and renal diseases patients. The Cronbach's alpha coefficients of the subscales were found to range between 0.77 and 0.92 [25]. The Cronbach's alpha coefficients turned out to be between 0.86 and 0.88 in the present study.

Geriatric Depression Scale (GDS): Developed by Yesavage and associates in 1983, this scale consists of 30 items prepared to determine depression in the elderly [26]. The GDS was designed as a screening test valid for older patients with easy administration and scoring. The scale was tested for validity and reliability in Turkish by Ertan and associates in 1997 in our country. The GDS consists of 30 items, each item being marked "Yes" or "No". Ten of these 30 items indicate depression if answered negatively and 20 if answered positively. The questions relate to the period "in the last week". The scores obtainable from the scale are between 0 and 30. The scores 0-10 mean "no depression", 11-13

"possible depression", 14 and above "definite depression". The alpha value was found as 0.92 in the study of Ertan and associates [27] and as 0.73 in the present study.

2.2. Data Analysis

The data obtained from the study were assessed electronically using the appropriate analyses in the SPSS (Statistical Package for Social Sciences) 13.0 package program. The descriptive statistics were given in numbers, percentages, and means. A Shapiro-Wilk analysis was run to see whether the data had a normal distribution and since the data were found to not have a normal distribution, it was decided to use nonparametric analyses, which were Mann Whitney U test, Kruskal Wallis, and Spearman Correlation Analysis tests. The significance level was set at $p<0.05$.

2.3. Ethical statements

After obtaining an ethics committee approval from the Ethics Committee of Erzincan University (9 December 2015, Protocol no. 12/01), official permissions were obtained from the institutions where the study was to be conducted. Verbal consents were obtained from the individuals who would participate in the study and those who volunteered were included in the study.

3. Results

The mean number of cigarettes smoked daily by current smokers was 18.66±18.17 and the mean number of cigarettes smoked daily by previous smokers was 32.15±21.53. The mean duration of smoking was 26.30±16.53 years in the elderly who smoked currently and 33.04±14.91 years in those who smoked previously (Table 1).

Table 1. Patient's socio-demographic and disease-related variables (n=340**)**

Variables		**n**	**%**
Age group	65-69	158	46.5
	70-74	86	25.3
	75-79	39	11.5
	80 and over	57	16.8
Gender	Female	136	40.0
	Male	204	60.0
Education status	Illiterate	113	33.2
	Literate/ Primary school	180	53.0
	Secondary School	32	9.4
	High School/ University	15	4.4
Marital status	Married	261	76.8
	Single/Widowed/divorced	79	23.2
Income status	Income is lower than expenditure	142	41.7
	Income is equal to expenditure	167	49.1
	Income is higher than expenditure	31	9.1
Social support status	Yes	195	57.4
	No	145	42.7
Perceived health status	Good	48	14.1
	Moderate	175	51.5
	Poor	117	34.4

Table 1. *Continued*

Variables		**n**	**%**
Status of having any disease other than COPD	Yes	230	67.6
	No	110	32.4
Duration of Disease	Less than 1 year	35	10.3
	1-5 years	121	35.6
	6-10 years	112	32.9
	More than 11 years	72	21.2
Currently smoking status	Continuous	21	6.2

	Sometimes	27	7.9
	Can not use	292	85.9
Previous smoking status	Yes	206	60.6
	Sometimes	11	3.2
	No	123	36.2
Smoking amount, grooves/day		18.66±18.17	
Duration of smoking, years		26.30±16.53	
If you have used cigarettes before, the number of cigarettes per day (grain)		32.15±21.53	
If you have used cigarettes before, the duration of use (years)		33.04±14.91	

Of the older patients with COPD, 50.9% were at a definite depression level with a mean depression rate of 13.76±5.02 (Table 2).

Table 2. Score distribution and depression status of elderly patients with COPD (n=340)

Depression Appearance Status	n	%	Mean±SD
No Depression	91	26.7	2.02±3.51
Possible Depression	76	22.4	2.69±5.03
Definite Depression	173	50.9	9.05±9.17
Total	340	100.0	**13.76±5.02**

The patients' mean morale scale score was 5.78±2.11. From the subscales of the social support scale, the mean family subscale score was 20.58±6.58, the mean friends' subscale score 14.63±7.40 and the mean significant other subscale scores 54.71±16.80, and their mean depression score was 13.76±5.02 (Table 3).

Table 3. Score averages of moral, social support, and depression scales of elderly patients with COPD (n=340)

Scales		Mean	SD	Distribution Range
PGCMS		5.78	2.11	1-14
MSPSS	Family	20.58	6.58	4-28
	Friend	14.63	7.40	4-28
	Special people	19.50	7.18	4-28
	Total social support	54.71	16.80	12-84
Geriatric Depression Scale		13.76	5.02	3-26

No significant difference was found between the mean morale, social support, and depression scores of the older COPD patients with respect to their ages. The differences between the patients' total social support scores and the friends' subscale scores were significant with respect to gender, but the differences between their morale and depression scores were insignificant. While the education status of the patients did not affect their depression scores, it affected their mean morale and social support scores. The patients' marital status affected their social support and depression scores but did not affect their morale. Their income status affected social support but did not affect morale and depression (Table 4).

Table 4. The distribution of moral, social support, and depression scale scores according to introductory characteristics of elderly patients with COPD (n=340)

Introduction Features	PGCMS	MSPSS				Geriatric Depression Scale
		Family	Friend	Special People	Total social support	
Age group						
65-69	6.41±2.16	20.89±6.56	14.99±7.70	19.73±7.07	55.61±16.90	14.02±5.22
70-74	6.42±2.05	19.77±6.43	13.85±6.84	18.58±7.45	52.20±15.40	12.94±4.73
75 -79	6.44±1.93	22.18±6.48	14.67±8.88	21.13±7.40	57.97±18.95	12.77±4.70
80 and over	6.21±1.96	19.84±6.79	14.77±6.30	19.14±6.85	53.75±16.84	14.96±4.87
KW/p	.621/0.892	5.474/0.140	1.033/0.793	4.036/0.258	3.913/0.271	7.917/**0.048**
Gender						
Female	6.28±2.03	19.82±6.43	13.29±7.21	19.15±6.92	52.27±15.82	14.10±5.20
Male	6.45±2.09	21.08±6.64	15.51±7.42	19.74±7.36	56.33±17.26	13.54±4.90
MW-U/p	-.743/0.458	-1.862/0.063	-2.723/**0.006**	-.965/0.335	-2.481/**0.013**	-1.000/0.317
Education status						
Illiterate	6.07±1.89	17.93±6.79	13.40±6.95	17.46±6.99	48.79±16.77	14.03±5.48
Literate/ Pri. /Sec.S.	6.58±1.89	22.49±5.77	13.74±7.93	20.19±6.79	56.42±16.61	12.84±4.96
High School/	6.32±2.21	21.72±6.06	15.37±7.33	20.39±7.09	57.48±16.18	13.67±4.77
University	7.06±2.17	21.64±6.50	16.72±7.52	21.26±7.45	59.62±17.47	14.47±4.53
KW/p	10.124/**0.018**	26.454/**0.000**	9.159/**0.027**	15.623/**0.001**	23.760/**0.000**	2.278/0.517
Income status						
Income < expnd.	6.27±1.91	18.94±7.00	12.99±6.79	18.63±6.79	50.56±16.03	13.96±5.24
Income = expnd.	6.41±2.07	21.74±5.98	20.50±7.20	20.50±7.20	57.86±16.49	13.49±4.94
Income > expnd.	6.74±2.07	21.87±6.18	18.13±8.24	18.13±8.24	56.77±18.28	14.32±4.42
KW/p	.922/0.631	13.824/0.**001**	11.786/**0.003**	7.237/**0.027**	15.175/**0.001**	1.243/0.537
Marital status						
Married	6.47±2.10	21.38±5.99	14.99±7.44	20.49±6.86	56.87±15.99	14.01±4.81
Single/Wid./Div.	6.08±1.94	17.90±7.69	13.38±7.17	16.18±7.28	47.46±17.50	12.94±5.63
MW-U/p	-1.408/0.159	-3.625/**0.000**	-1.654/0.098	-4.525/**0.000**	-4.145/0 **.000**	-1.971/**0.049**

The patients' duration of disease did not affect their morale, social support, and depression scores. A significant correlation was found between the mean scores of perceived health and social support, but the correlation between the mean morale and depression scores was not significant. While the presence of another chronic disease except diabetes affected the morale score and the subdomain of the social support scale, it did not affect the other subscales of social support and depression. Receiving social support positively affected the significant other subscales of social support, but did not affect the morale, total social support, and depression scores (Table 5).

The correlation between previous smoking and the mean morale score was found significant, but there was no significant correlation between social support and depression. A significant correlation was found also between current smoking, income status, and social support, but there was no significant correlation between morale and depression. There was no significant correlation between the number of cigarettes smoked daily by the older COPD patients who were current smokers and their morale and depression levels and the family, significant other subscales of the social support scale, but there was a significant negative correlation between the total social support and friends' subscale. There was no significant correlation between the current smokers' duration of smoking and their morale and depression levels and the family, significant other subscales of the social support scale, but there was a significant negative correlation between the total social support and friends subscale. The number of cigarettes smoked daily by the older patients who smoked previously did not affect their morale and

depression levels, the total social support scale, and the family and significant other subscales, but affected the significant other subscales positively. There was no significant correlation between the duration of smoking in the older patients who smoked previously and their morale and depression levels, the total social support scale, and its subscales (Table 6).

Table 5. Distribution of moral, social support, and depression scale scores according to disease characteristics of elderly patients with COPD (n=340)

Disease Characteristics	**PGCMS**	**MSPSS**				**Geriatric Depression Scale**
		Family	**Friend**	**Special People**	**Total social support**	
Duration of Disease						
Less than 1 year	6.89±2.13	19.77±5.87	15.26±6.10	18.77±6.54	53.80±13.03	13.74±4.43
1-5years	6.40±2.01	21.58±6.21	15.07±7.24	20.27±7.05	56.93±10.00	13.91±5.29
6-10 years	6.22±1.83	20.01±6.63	13.99±7.59	19.03±7.45	53.03±17.90	14.01±4.75
More than 11 years	6.36±2.46	20.18±7.31	20.18±7.31	19.31±7.30	54.04±17.83	13.14±5.27
KW/p	2.699/0.440	4.333/0.228	2.027/0.567	2.840/0.417	3.592/0.309	1.186/0.756
Perceived health status						
Good	6.23±2.42	25.21±3.63	17.71±8.19	23.02±6.59	65.94±12.73	13.63±4.48
Moderate	6.53±2.18	20.41±5.98	14.59±7.05	19.59±6.70	54.59±15.59	13.83±4.98
Poor	6.22±1.72	18.94±7.46	13.42±7.29	17.92±7.63	50.28±17.95	13.72±5.32
KW/p	1.720/0.423	30.719/**0.000**	11.039/**0.004**	17.900/**0.000**	28.333/**0.000**	0.009/0.995
Status of having any disease other than COPD						
Yes	6.21±1.99	20.16±6.34	14.46±7.37	19.53±6.92	54.15±16.42	13.88±5.12
No	6.74±2.18	21.45±6.99	14.98±7.50	19.44±7.73	55.87±17.59	13.51±4.82
MW-U/p	-2.323/**0.020**	-2.111/**0.035**	-0.533/0.594	0.173/0.863	-0.867/0.864	-0.502/0.616
Social support status						
Yes	6.27±2.03	20.81±6.30	14.02±6.91	20.32±6.63	55.15±15.01	13.87±4.89
No	6.53±2.13	20.26±6.98	15.52±7.96	18.38±7.79	54.16±19.10	13.62±5.18
MW-U/p	-1.203/0.229	-0.370/0.711	-1.785/0.074	-2.199/**0.028**	-0.343/0.731	-0.515/0.607
Currently smoking status						
Continuous	5.43±1.96	19.19±8.82	16.14±8.28	18.14±7.98	53.48±22.37	13.81±6.15
Sometimes	6.63±2.50	23.96±5.60	19.48±8.19	22.59±7.27	66.04±17.91	13.96±0.54
Can not use	6.43±2.02	20.37±6.40	14.07±7.10	19.31±7.07	53.75±15.90	13.74±4.99
KW/p	4.783/0.092	8.399/**0.015**	12.687/**0.002**	7.562/**0.023**	14.204/**0.001**	0.020/0.990
Previous smoking status						
Yes	6.53±2.08	21.11±6.55	15.34±7.27	19.87±7.38	56.32±16.86	13.50±4.87
Sometimes	7.91±1.97	20.36±6.07	13.91±8.54	18.09±6.96	52.36±15.53	13.18±5.67
No	5.99±1.97	19.71±6.61	13.50±7.43	19.01±6.86	52.22±16.60	14.26±5.21
KW/p	12.215/**0.002**	3.618/0.164	4.835/0.089	2.431/0.297	5.436/0.066	1.647/0.439

Table 6. Correlation analysis of the smoking prevalence of the elderly and Morale, Social Support and Depression Scale (n=340)

		MSPSS			Geriatric
PGCMS	**Family**	**Friend**	**Special People**	**Total social support**	**Depression Scale**
Smoking amount, grooves/day					
r	-0.070	-0.142	-0.398	-0.135	-0.305	0.000
p	0.630	0.324	**0.004***	0.351	**0.032****	1.000
Duration of smoking, years[a]					
r	-0.098	-0.106	-0.335	-0.229	-0.299	0.190
p	0.500	0.464	**0.018****	0.110	**0.035****	0.186
If you have used cigarettes before, the number of cigarettes per day (grain)					
r	-0.113	0.080	0.003	.197	0.112	-0.015
p	0.096	0.235	0.970	**.003***	0.099	0.820
If you have used cigarettes before, the duration of use (years)[b]					
r	-0.044	0.009	-0.056	0.003	-0.023	0.000
p	0.515	0.896	0.409	0.963	0.737	0.999

*p<0.01 **p<0.05

[a] The current smoking period of smokers [b] Smoking history of previous smokers

While a significant negative correlation was found between the morale and social support statuses of the elderly, there was no correlation between their morale and depression symptoms (Table 7).

Table 7. Correlation analysis of Morale, Social Support and Depression Scale (n=340)

Scales		**PGCMS**	
		r	**p**
MSPSS	Family	-0.063	0.246
	Friend	-0.061	0.264
	Special People	-0.122	**0.025***
	Total Social Support	-0.113	**0.037***
Geriatric Depression Scale		-0.003	0.952

*p<0.05

4. Discussion

The social and economic burden caused by COPD leads to impaired morale, depression, and social support deficiency in patients.

The prevalence of depression is reported to be 10-45% in hospitalized patients. Old age can be considered as a "disability event" where morphological, physiological, and pathological changes progress negatively, various diseases combine, and physical and mental capabilities decline. The physical and psychosocial changes that occur during the aging process are important in that they pave the way for depression and affect the response to the treatment process [28]. Adaptation difficulties, anxiety disorders, panic disorder, and depression symptoms are seen in respiratory system diseases. The bronchodilators, sympathomimetics, and decongestants used in the treatment of respiratory system diseases also lead to anxiety, depression, and psychotic symptoms [29,30]. In the present study, 50.9% of the older patients with COPD were found to be at the definite depression level with a mean depression rate of 13.76±5.02. The mean morale scale score of the patients was 5.78±2.11 and their mean total social support score was 54.71±16.80. Similar to the results of this study, many other studies have also found that there are anxiety and depression symptoms in most COPD patients [15,31]. As relayed by Atasever and Erdinç (2003), 90% of the subjects with COPD had depression and anxiety in the study of Gore and associates [32,33]. In many studies made with hospitalized patients and patients with COPD, the mean social support scores were similar to the result of the present study [16,31]. In a study, the patients with essential tremors in a community were found to have lower morale compared to the control

group [34]. The morale level was found low and depression and social support levels high in that study. A high depression level leads to low morale.

The ages of the older patients with COPD who were included in the study affected their depression level but did not affect their morale and social support levels. In another study made with patients with COPD, a statistically significant correlation was found between age and perceived family and friend support, the perceived family and friend support turned out to be lower in patients aged 65 and over [14]. Another study found that the correlation between age and the mean depression score was insignificant, but there was a significant correlation between age and perceived social support score [15]. Rather than having a subjective relationship with age and health, morale may have an objective relationship with age and health [10]. When the patients were compared in the morale category (low, moderate, and high), a significant correlation was found between age and the morale score [9]. Another study found that there was a significant correlation between morale and advanced age [34]. The physical and psychosocial changes that occur during the aging process are important in that they pave the way for depression and affect the response to the treatment process [28]. Advancing age leads to low morale which in turn sets the depression stage.

Social support was found to correlate to gender but did not affect morale and depression in older patients with COPD. Unlike the result of this study, a study exploring social support in patients with COPD found that the family and friend support perceived by the patients did not have any statistically significant correlation with gender [14]. In another study, the correlation between gender and mean social support score was found insignificant [16]. Another study with older patients showed that there was a significant correlation between gender and morale scores [9]. Similar to the result of this study, another study made with patients with COPD found no significant correlation between gender and mean depression scores [15]. Depression is one of the major factors affecting morale negatively. As gender does not affect depression, it can be thought that it also does not affect morale.

A significant correlation was found between education statuses and morale, social support scores of the older patients with COPD, but no significant correlation with their mean depression score. Unlike the result of this study, two studies found no statistically significant correlation between patients' education status and perceived family support or social support [14,16]. One of the latest studies made in Europe reported that mortality from COPD was higher in men and women who had a lower education level [5]. The elderly with a high level of education usually have sufficient social support resulting in a better moral status. Since speedy information flow and change render the knowledge of older people obsolete, they can no longer serve as consultants for youngsters [28]. Depression then becomes inevitable.

There are difficulties in investigating the effect of socioeconomic status on the development of COPD because a low socioeconomic level is closely associated with other risk factors of COPD, particularly with smoking, nourishment, occupation, and air pollution indoors and outdoors. However, the studies exploring the impact of socioeconomic status adjusted for the other risk factors have reported that a low socioeconomic status, which is generally measured with total income, constitutes a risk factor independently for COPD, and lung functions tend to be poorer in groups with a low socioeconomic status [5]. We also found in the present study that the income statuses of older patients affected social support, but did not affect their morale and depression. In a study made with inpatients, the correlation between the economic statuses of patients and their social support was found significant [16]. Lack of trust in other people, fear of being exposed to violence and decreased financial support cause the elderly to be isolated from society, intensifying their loneliness and social alienation. Reduced financial facilities make them dependent on others [28]. Depression considerably increases healthcare costs in older people [10]. The average healthcare cost of COPD patients aged 65 and over, which includes hospitalization, outpatient services, and medications, was found twice as much as that of the control

group without COPD [3]. The fact that patients with a better income status have also better social support status does not necessarily affect their morale and depression.

The marital statuses of the patients were found to affect their social support and depression scores, but to not affect their morale scores. Two studies made with patients with COPD and hospitalized patients found that there was no statistically significant difference between perceived family, friend support, and social support with respect to marital status [14,16]. In another study, a significant difference was found between perceived social support scores with respect to patients' marital status. In a study made with COPD patients, a significant correlation was found between marital status and mean depression scores [15]. A study made with older people living in a nursing home and at home showed that the prevalence of depression was higher in those who were single or widowed than in the elderly living at home [35]. In the present study, single/widowed patients were found to have a lower level of social support. The fact that married elderly share their problems and support each other may have influenced this result.

The patients' duration of disease did not affect their morale, social support, and depression statuses. Similar to the result of the present study, a study made with COPD patients found that duration of disease had no significant correlation with mean depression scores or perceived family and friend support [14,35]. The morale of patients is associated with their social support being high and depression levels low. Duration of disease not affecting social support and depression may suggest that it also does not affect morale.

Depression and restricted physical activities resulting from dyspnea in patients with COPD also impair their social well-being [32]. The patients' perceived health was found to be significantly correlated with their mean social support scores, but not with their mean morale and depression scores. In old age, not only the individual's loved ones but also their health abandons them. There is no sign of their former strength leaving them incapable of looking after themselves. Their ability to move has decreased; they have become a person "receiving help" not a person "helping others, capable and giving" [28]. This condition of the elderly increases their social support level but lowers their morale and depression levels.

While the presence of another chronic disease except COPD was found significantly correlated with the mean family subscale score of the moral and social support scale, it did not affect the mean total social support and depression scores. It was found in a study that the perceived social support scores were significantly correlated with COPD's impact on mental health and the presence of another physical disease [15]. Another study found that the presence of chronic disease in the elderly, social support levels, religious beliefs, and personal characteristics affected morale [12]. Chronic disease increases the risk of depression [36]. In the present study, more than half of the older patients had another chronic disease besides COPD.

Smoking is the most important environmental risk factor for developing COPD. In developed countries, smoking is responsible for the occurrence of COPD at a rate between 80 and 85% [5]. While current smoking was found to affect social support, it did not affect morale and depression. Previous smoking affected morale but did not affect social support and depression. A considerable portion of non-communicable diseases can be avoided using preventive measures for the four basic risk factors; smoking, inadequate physical activity, excessive alcohol consumption, and unhealthy eating [2]. While smoking is the most important risk factor for COPD, patients' exposure to shun and previous smoking moods may have an impact on this outcome. Previous smoking may be thought to have a psychologically relaxing effect which results in increased morale.

COPD is a physical disease with social consequences that necessitate the individual to make changes in their daily activities and lifestyle. COPD has significant adverse effects on the person's social interaction and social acceptance [13]. While a significant negative correlation was found between

morale and social support statuses of the elderly, there was no correlation between their morale and depression symptoms. Kara and Mirici (2004) found that family and friend support was low in COPD patients experiencing depression [37]. Another study found that there was a negative correlation between social support and depression; as the social support is given to patients decreased, their depression symptoms worsened [15]. A study found that individuals who joined support groups less frequently had a higher level of depression [38]. It was found that people with a good social support status had a lower level of depression.

5. Conclusion

It was found that 50.9% of the older patients with COPD were at a definite depression level and had high mean depression and social support scores. The mean morale scores of the elderly were found to be below. There was no significant difference between the mean moral, social support, and depression scores of the older COPD patients with respect to their age groups. The correlation between the patients' gender and their total social support scores was found to be significant, but the difference between their morale and depression scores was insignificant. While the education status of the elderly did not affect their depression scores, it affected their mean morale and social support scores. There was a significant negative correlation between the moral and social support statuses of the elderly, but no such correlation between their morale and depression symptoms.

In view of these results, nurses should be encouraged to utilize family and institutional social support systems when giving care to patients with COPD and to employ their communication skills to improve patients' morale while also taking into consideration their socio-demographic characteristics. They should also inform patients about their diseases regularly to lower their depression levels.

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Ethical Dimension of the Research

Ethics committee approval from the Erzincan University Ethics Committee (December 18, 2015, Protocol no. 12/01) and approvals from relevant institutions have been obtained for the research to be carried out. The research was carried out in accordance with the principles of the Helsinki Declaration.

Authors' Contributions

Study concept and design: RF, AÜ, PK;
Data collection and analysis: AÜ, PK, RF, XL;
Drafting and revision manuscript: AÜ, PK, RF;
All authors read and approved the final manuscript.

Conflict of interests:

The authors declare that they have no conflict of interests.

References

[1] Dedeli, Ö., Aging and Physiological Changes in the Field / Problems, in: *Geriatric Care Principles*, (Ed. Kaptan G.), Nobel Medical Bookstores, Istanbul, pp.13-23, 2013.

[2] *T. R. Ministry of Health, Public Health Institution of Turkey. Action Plan for the Prevention and Control Program for Cardiovascular Diseases in Turkey (2015-2020).* T. R. Ministry of Health Publication No: 988, Anıl Reklam Matbaa Ltd. Şti., Ankara, 2015.

[3] Akçay, Ş., *Pulmonary Diseases and Treatment Principles Common in the Elderly. Basic: Basic Geriatrics for Primary Care.* Perception Presentation, Ankara, pp: 31-33, 2012.

[4] Plishka, C., Rotter, T., Kinsman, L., Hansia, M.R., Lawal, A., Goodridge, D., Penz, E., Marciniuk, D.D., "Effects of clinical pathways for chronic obstructive pulmonary disease (COPD) on patient, professional and systems outcomes: protocol for a systematic review." *Systematic Reviews*, 5, 135-144, 2016. DOI 10.1186/s13643-016-0311-8.

[5] *T . R. Ministry of Health, Public Health Institution of Turkey. Turkey Chronic Airway Disease Prevention and Control Program (2014-2017).* T. R. Ministry of Health Publication No: 947. Anıl Reklam Matbaa Ltd. Şti., Ankara, 2014.

[6] *Chronic Obstructive Pulmonary Disease (COPD)* http://www.toraks.org.tr/halk/Default.aspx?p=koah (Date of access: 19 March 2015).

[7] Gökçe-Kutsal, Y., Eyigör, S., Clinician Dysphasia in the Eyes of Aging. in: *Elderly Health: Problems and Solutions.* (Eds. Aslan D, Ertem M.), Palme Publishing, 1st Edition, Ankara, pp: 48-59, 2012.

[8] *Morale and motivation*. http://www.bilgiustam.com/moral-ve-motivasyon/ (Date of access: 19 March 2015).

[9] Benito-León, J., Louis, E.D., Rivera-Navarro, J., Medrano, M.J., Vega, S., Bermejo-Pareja, F., "Low Morale is Associated with Increased Risk of Mortality in The Elderly: A Population-Based Prospective Study (NEDICES)", *Age and Ageing*, 39, 366–373, 2010.

[10] Sullivan, M.D., "Maintaining good morale in old age. In: Successful Aging." *West J Med.*, 167, 276-284, 1997.

[11] von Heideken Wagert, P., Ronnmark, B., Rosendahl, E., Lundin-Olsson, L., Gustavsson, J.M., Nygren, B., Lundman, B., Norberg, A., Gustafson, Y., "Morale in the Oldest Old: the Umea 85+ Study", *Age Ageing* 34(3), 249-55, 2005.

[12] Loke, S.C., Abdullah, S.S., Chai, S.T., Hamid, T.A., Yahaya, N., "Assessment of Factors Influencing Morale in the Elderly", *PLoS ONE*, 6(1), e16490, 2011. doi:10.1371/ journal.pone.0016490.

[13] Tel, H., Tel, H, "A Socio-Cultural Reflection of Chronic Obstructive Pulmonary Disease: Stigma", *Journal of Ege Unıversıty Nursıng Faculty* 28(3), 137-142, 2012.

[14] Aras, A., Tel, H., "Determination of Perceived Social Support for Patients with COPD and Related Factors", *Tur Toraks Der.*, 10, 63-8, 2009.

[15] Korkmaz, T., Tel, H., "Determination of the Conditions of Anxiety, Depression and Social Support among the Patients with COPD", *Journal of Anatolia Nursing and Health Sciences* 13(2), 79-86, 2010.

[16] Arslantaş, H., Adana, F., Kaya, F., Turan, D., "Hopelessness and Social Support Level In the Inpatients and Factors Affecting Them", *Florence Nightingale Journal of Nursing*, 18(2), 87-97, 2010.

[17] Sarı, D., Khorshid, L., Eşer, İ,. "Examining the Association of Perceived Social Support and Anxiety Level of Newly Hospitalized Patient", *Journal of Ege Unıversity School of Nursıng* 27(2), 1-9, 2011.

[18] Erden-Aki, Ö., *Psychiatric Problems in the Elderly. Basic: Basic Geriatrics for Primary Care.* Perception Presentation, Ankara. pp: 34-38, 2012.

[19] Havlucu, Y., "Assessment of the relationship between quality of life, performance status, anxiety and depression in COPD cases", *2. Healthy Life Quality Congress*, 5-7 April 2007, İzmir, Turkey. Meta Printing Services. pp: 110, 2007.

[20] Karadakovan, A., *Elderly Health and Care.* Academician Medical Bookstore, Ankara, pp: 334-344, 2014.

[21] Rideout, E., Montemuro, M., "Hope, Morale and Adaptation in Patients with Chronic Heart Failure", *J Adv Nurs*, 11(4), 429-38, 1986.

[22] Lawton, M.P., "The Philadelphia Geriatric Center Morale Scale: a Revision." *J Gerontol*, 30(1), 85-9, 1975.

[23] Pınar, R., Öz, H., "Validity and Reliability of the Philadelphia Geriatric Center Morale Scale among Turkish Elderly People", *Qualıty of Life Research*, 20(1), 9-18, 2011.

[24] Zimet, G.D., Dahlem, N.W., Zimet, S.G., Farley, and G.K., "The Multidimensional Scale of Perceived Social Support", *Journal of Personality Assessment*, 52, 30-41, 1988.

[25] Eker, D., Arkar, H., "Factorial Structure, Validity, and Reliability of the Multidimensional Scale of Perceived Social Support", *Turkish Journal of Psychiatry.* 10(34), 45-55, 1995.

[26] Yesavage, J.A., Brink, T.L., Rose, T.L., et al. "Development and Validation of a Geriatric Depression Screening Scale: A Preliminary Report", *J Psychiatric Res.*, 17 (1), 37-49, 1983.

[27] Ertan, T., Eker, E., Şar, V., "Validity and Reliability of Geriatric Depression Scale in Turkish Elderly Population", *Archives of Neuropsychiatry*, 34(2), 62-71, 1997.

[28] Kaya, B., "Late-life and Depression: Diagnosis and Assessment", *Turkish Journal of Geriatrics* 2 (2): 76-82, 1999.

[29] Özkan, S., Psychiatric *Medicine: Consultation Liyeson Psychiatry.* Roche, İstanbul, 83-291, 1993.

[30] Özdemir, Ü., Taşcı, S., "Psychosocial Problems and Care of Chronic Diseases", *Erciyes University Medical Science Journal* 1(1), 57-72, 2013.

[31] Petitte, T., Mallow, J., Barnes, E., Petrone, A., Barr, A., Theeke, L., "A Systematic Review of Loneliness and Common Chronic Physical Conditions in Adults", *Open Psychol J.*, 8(2), 113-132, 2015. doi:10.2174/1874350101508010113.

[32] Atasever, A., Erdinç, E., "Quality of Life in COPD", *Journal of Tuberculosis & Thorax* 51(4), 446-455, 2003.

[33] Gore, J.M., Brophy, C.J., Greenstone, A.M., "How Well Do We Care For Patients with End-Stage Chronic Obstructive Pulmonary Disease (COPD)? A Comparison of Palliative Care and Quality of Life in COPD and Lung Cancer", *Thorax*, 55, 1000-6, 2000.

[34] Louis, E., Benito-León, J., Bermejo-Pareja, F., "On Behalf of the Neurological Disorders in Central Spain (NEDICES) Study Group. Philadelphia Geriatric Morale Scale in Essential Tremor: A Population-based Study in Three Spanish Communities", *Mov Disord.*., 23(10), 1435-1440, 2008. doi:10.1002/mds.22124.

[35] Demir, G., Ünsal, A., Gürol Arslan, G., Çoban, A., "Study of Prevalence of Depression Among Elders Living At Nursing Home and House", *Gümüşhane University Journal of Health Sciences* 2(1), 1-12, 2013.

[36] Kravitz, R.L., Ford, D., "Introduction: Chronic Medical Conditions and Depression: The View from Primary Care", *Am J Med.*, 121(11), 1-7, 2008. doi:10.1016/j.amjmed.2008.09.007.

[37] Kara, M., Mirici, A., "Loneliness, Depression, and Social Support of Turkish Patients with Chronic Obstructive Pulmonary Disease and Their Spouses", *Journal of Nursing Scholarship*, 36(4), 331-6, 2004.

[38] Hoth, K.F., Wamboldt, F.S., Ford, D.W., Sandhaus, R.A., Strange, C., Bekelman, D.B., Holm, K.E., "The Social Environment and Illness Uncertainty in Chronic Obstructive Pulmonary Disease", *Int J Behav Med*., 22(2), 223-232, 2015. doi:10.1007/s12529-014-9423-5.