



Original Article

The Effect of Death Anxiety on Psychosocial Adjustment in Individual With Chronic Obstructive Pulmonary Disease

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ABSTRACT

Objectives: This study was carried out in a descriptive manner to determine the effect of death anxiety on psychosocial adjustment in patients with chronic obstructive pulmonary disease (COPD).

Materials and Methods: The study was carried out on 150 inpatients and outpatients who were being treated at the thoracic diseases department of a state hospital during January 1– April 20, 2016. Personal information form, death anxiety scale (DAS) and psychosocial adjustment to illness scale-self report (PAIS-SR) were used for data acquisition. The data were analysed through IBM Statistical Package for the Social Sciences 22 software.

Results: The DAS score average of the patients was determined as 6.96 ± 3.45 , PAIS-SR total score average was determined as 67.54 ± 14.96 . A positive and statistically significant relationship was determined between the death anxiety of the patients and their psychosocial adjustments ($P < 0.05$).

Conclusion: It can be concluded as a result of the study that the death anxieties of COPD patients are at a moderate level, that their psychosocial adjustments to the disease are at a bad level and that their psychosocial adjustments to the illness and to life are disrupted with increasing death anxiety. Psychiatry nurses can contribute to increasing the psychosocial adjustment to the illness of the patient by helping the patient and his/her family in adjusting to the changes in their life styles, preventing non-beneficial adjustments, developing the coping skills of the patient and his/her family and accordingly making the necessary planning.

Keywords: Chronic obstructive pulmonary disease, Death anxiety, Psychiatric nursing, Psychosocial adjustment

INTRODUCTION

Chronic diseases of the respiratory system are examined as serious diseases since they cause limitations and insufficiencies that hamper living activities in individuals and lead to an increase in mortality rates. Chronic obstructive pulmonary disease (COPD) is the most frequently seen respiratory disease.^[1] COPD is a chronic pulmonary disease generally characterised by irreversible and progressive airflow restriction, shortness of breath, cough and sputum and causes chronic impairment in pulmonary functions.^[2] COPD is a disease with serious morbidity, mortality and prevalence increasing all over the world.^[3,4] According to the World Health Organization (WHO) reports for 2002, COPD is listed as the fifth most common cause of death and is predicted to be the third most common cause of death in 2030.^[5] There is a significant relationship and interaction between the respiratory system and the psychological state. It affects the respiratory system and triggers changes in the

mood. Respiratory system diseases can often be accompanied by various psychiatric illnesses such as anxiety disorders, adjustment difficulties, depression, delirium, personality disorders, sleep disorders and psycho-sexual disorders. COPD and asthma are the leading respiratory system diseases associated with psychiatry.^[6] Anxiety is an unpleasant feeling and experience of tedium and concern in the emotional, behavioural and physical fields accompanied by various physiological symptoms and that can occur in certain periods of an individual's life.^[7] Dyspnoea and shortness of breath lead to anxiety and death anxiety. Similar to all chronic diseases, COPD increases concerns for the future and cause despair and anxiety due to such continuous use of medication, hospital dependence, as well as functional disruption of the affected organs.^[8] Death anxiety can be described as the concern that people feel in the face of the truth that their existence in the world is going to end. Death anxiety is one of the cornerstones of human fears and anxiety.^[9]

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Received: 09 July 2021 Accepted: 10 August 2021 EPub Ahead of Print: 18 September 2021 Published: 24 November 2021 DOI: 10.25259/IJPC_338_20

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There are some periods in which physical illnesses increase death anxiety. The first is when the patient finds out that the disease is in its final stages. In this period, suicidal inclinations and depression can appear in the individual. The second is the stage in which the individual experiences fatigue, loss of function and disability due to organic disease.^[10] It is stated that the patients' belief that the disease is affecting their daily life activities causes a 24-fold deterioration in psychosocial adjustment.^[11] Psychosocial adjustment is affected by all the factors associated with disease and treatment. At the same time, improvement or deterioration of psychosocial adjustment affects the disease's prognosis.^[12] Successful psychosocial adjustment to chronic illness is defined as sensory and emotional tolerance of differences in physical and functional condition. Unsuccessful adjustment is the state of intolerance, which affects the individual negatively in physical, emotional and social aspects and is caused by the differentiation of long-lasting or permanent negative features. In unsuccessful adjustment symptoms of anxiety and depression, psychogenic pain, chronic fatigue, social withdrawal and impaired cognitive activity are observed.^[13,14] Nurses should specialise in specific topics such as problem-solving skills and techniques for coping with anxiety. Consultation liaison psychiatry (KLP) nurse and all members of the treatment team should act in coordination with issues such as analysis of difficult clinical problems and anxiety.^[15] The aim of this study is to determine the relationship between COPD patients' death anxiety levels and their levels of psychosocial adjustment toward the disease.

MATERIALS AND METHODS

Type of study

This study was carried out in a descriptive manner to determine the effect of death anxiety on psychosocial adjustment in patients with COPD.

Population and sample

The population for the study consisted of 254 patients diagnosed with COPD and followed up on the dates that the study was carried out at the Batman Regional State Hospital Thoracic Diseases inpatient and outpatient departments. Using the 'Death Anxiety Scale' in determining the sample size, the minimum sample size in the G-Power program was $\alpha=0.05$, the power of the test $(1-\beta)$ was 0.80 and the sample number was 121. The sample group consists of 150 individuals taken from the population and who matched the criteria on the dates that the study was conducted. Of these 150 individuals, 33 were outpatients and 117 were inpatients. The three patients who did not want to participate in the study, the 58 patients who were illiterate and the 43 patients aged over 65 were all excluded from the sample group.

Criteria for inclusion in the study

The following criteria were included in the study:

1. Knowing how to read and write Turkish
2. Being treated as an inpatient or outpatient diagnosed with COPD
3. Volunteering to participate in the study
4. Being aged between 18 and 65 years old.

Criteria for exclusion from the study

The following criteria were excluded from the study:

1. Refusal to participate in the study
2. Being cognitively and communicatively unable to maintain the interview or fill in the questionnaire.

Data collection

The data were collected by face-to-face interviews after the author informed the patients about the purpose of the study and their consent was obtained. 'Personal Information Form,' 'Death Anxiety Scale' (DAS) and the 'Psychosocial Adjustment to Illness Scale – Self-Report' (PAIS-SR) were prepared and used by the researchers as data collection tools.

The interviews with the outpatients were conducted in a suitable room once they had been examined and in the patient's room in the case of the inpatients. The interviews with each patient took 20 min on average.

Personal information form

The form, which was drawn up by the researcher, contains 14 points aimed to determine the participants' demographic (age, gender, marital status, etc.) information and information relating to the disease (duration of illness, family history, etc.).

DAS

It was developed by Templer in 1970 and its validity and reliability study in Turkey was carried out by Şenol in 1989. It is scale consisting of 15 agree-disagree questions that measure a person's anxiety and fears regarding their death and risk of death. A score of '1' was given to each 'Agree' response (e.g., 'I am very afraid of dying') and '0' to each 'Disagree' response given to the first nine questions, while a score of '1' was given to each 'Disagree' response and '0' was given to each 'Agree' response given to the next six questions. The death anxiety score is the sum of the scores taken from the scale. The maximum score taken from the scale is 15. 0–4 points are considered as the 'mild level,' 5–9 points are considered as the 'moderate level,' 10–14 points as the 'severe level' and 15 points as the 'panic level' of 'death anxiety.' Şenol determined the Cronbach's Alpha coefficient as 0.86 in his Turkish validity and reliability

study.^[16] Templer found the reliability of 'Test-Retest' as 0.83 in the reliability study.^[17] Cronbach's Alpha coefficient for this study was found to be 0.78.

Psychosocial adjustment to illness scale - self-report (PAIS-SR)

The psychosocial adjustment to illness scale was developed by Derogatis and Lopezin 1983. The scale measures the interaction of individuals with other individuals and institutions that make up the socio-cultural environment. The PAIS-SR scale consists of 46 items.

These items are divided into seven sections of psychosocial adjustment to illness. These seven sections form subgroups of the scale. These sub-groups are: 'orientation to healthcare,' 'professional environment,' 'family environment,' 'sexual relations,' 'extended family relationships,' 'social environment' and 'psychological pressure.' In each question, four explanatory phrases are used to define different degrees of adjustment (e.g. which of the following best describes your behaviour in terms of paying attention to your health?) The participants can mark the answer that best describes their own personal experiences. Each item is scored on a scale ranging from 0 to 3. Negative differences since the beginning of the disease are evaluated with 3 points, while no difference or positive differences are evaluated with 0 points. Low scores on the PAIS-SR scale indicate successful psychosocial adjustment, while high scores indicate an unsuccessful psychosocial adjustment to illness. In studies conducted with PAIS-SR, scores lower than 35 were assessed as successful psychosocial adjustment, scores between 35 and 51 as moderate psychosocial adjustment and scores higher than 51 as unsuccessful psychosocial adjustment.^[18] The Turkish validity and reliability study of the Psychosocial Adjustment to Illness Scale - Self-Report was conducted by the candidates in a doctoral dissertation titled 'Illness Adjustment, Adaptation, Perception and, Self-Care Orientations of Patients with Acute and Chronic Illnesses' and the reliability coefficient for subgroups ranged from 0.80 to 0.95 and was 0.94 for the whole scale.^[12] In our study, the PAIS-SR reliability coefficient was 0.88 and it can be said that the questionnaire had a very high-reliability coefficient. The Cronbach Alpha coefficients for the subscales ranged from 0.60 to 0.87 in our study.

Evaluation of the data

The IBM Statistical Package for the Social Sciences for Windows 22 program was used for statistical analysis when evaluating the data obtained from the study. In the analysis of the data, percentage, arithmetic mean and standard deviation were used to examine the identifying characteristics of the individuals. Variance analysis was used when comparing

the DAS and PAIS-SR averages by socio-demographic characteristics, the Kruskal-Wallis test and independent-sample t-test were used in cases of abnormal distribution and the Pearson correlation analysis was used in identifying the relationship between death anxiety and psychosocial adjustment to illness. A value of $P < 0.05$ was the reference for the level of significance.

Ethical principles of the study

Before the study, the dissertation proposal was presented to the Gaziantep University Clinical Studies Ethics Committee and approval was obtained. Written permission was received from Turkey Public Hospitals Authority Batman Regional State Hospital, where the study was conducted. Individuals constituting the sample of the study; the purpose, plan and duration of the study were explained and written informed consent was obtained for them to participate in the research in accordance with the principle of 'willingness and volunteerism.'

RESULTS

The mean scores of patients for the DAS and PAIS-SR sub-scales and total scale are given in [Table 1]. The mean DAS score for the patients participating in the study was determined as 6.96 ± 3.45 . Among the patients' PAIS-SR sub-scales; the mean score for the adjustment to healthcare sub-scale was 8.63 ± 3.92 , the mean score for the professional environment sub-scale was 13.62 ± 2.62 , the mean score for the family environment sub-scale was 10.52 ± 3.70 , the mean score for the sexual relations sub-scale was 10.22 ± 3.55 , the mean score for the extended family relations sub-scale was 3.96 ± 2.37 , the mean score for the social environment sub-scale was 12.81 ± 4.07 and the mean score for the psychological pressure sub-scale was 7.75 ± 4.08 , while the total mean score for PAIS-SR was found to be 67.54 ± 14.96 .

The comparison of the DAS and Psychosocial Adjustment Scale Mean Scores according to the socio-demographic characteristics of the patients is shown in [Table 2]. Depending on the age of the patients, a significant difference ($P < 0.05$) was determined in the PAIS-SR's 'sexual relations' and 'social environment' sub-scales. Those who were in the younger age group were seen to have a better psychosocial adjustment in the fields of sexual relations and social environment. No significant difference ($P > 0.05$) was seen in the mean scores for DAS and the PAIS-SR's other sub-groups. According to the gender of patients, a significant difference ($P < 0.05$) was seen in the total DAS and PAIS-SR scales and all the sub-scales (except for adjustment to healthcare). It was determined that women had higher death anxiety levels than men and that their psychosocial adjustment levels were lower. According to the marital status of patients, the mean scores taken from PAIS-SR's subscales -adjustment to health care,

Table 1: The average death anxiety scale and psychosocial adjustment scale (PAIS-SR) scores for COPD patients.

Scales	X±SD	Received Min-Max Values	Possible Min-Max Values
DAS	6.96±3.45	1.0–14.0	0.0–15.0
PAIS-SR			
Adjustment to Health Care	8.63±3.92	1.0–21.0	0.0–24.0
Professional Environment	13.62±2.62	5.0–18.0	0.0–18.0
Family Environment	10.52±3.70	1.0–21.0	0.0–24.0
Sexual Relations	10.22±3.55	0.0–17.0	0.0–18.0
Extended Family Relations	3.96±2.37	0.0–11.0	0.0–15.0
Social Environment	12.81±4.07	2.0–18.0	0.0–18.0
Psychological Pressure	7.75±4.08	0.0–18.0	0.0–21.0
Total PAIS-SR	67.54±14.96	23.0–97.0	0.0–138.0

family environment, extended family relationships - and total PAIS-SR were significantly higher in patients whose spouse had died and the mean score taken from sexual relations subscale was higher in single patients ($P < 0.05$).

The high scores taken from the PAIS-SR indicate unsuccessful psychosocial adjustment. No significant difference was seen in the mean scores for DAS and the PAIS-SR's other sub-groups ($P > 0.05$). A significant difference was identified in the DAS and PAIS-SR's 'professional environment' and 'psychological pressure' sub-scales depending on where the patients lived ($P < 0.05$). It was determined that death anxiety was higher among individuals living in villages that psychological pressure was higher among individuals living in districts and that professional environment adjustment was poor among individuals living in cities. No significant difference was seen in the mean scores for DAS and the PAIS-SR's total and other sub-groups ($P > 0.05$). A significant difference was identified in the DAS and PAIS-SR's total and 'professional environment,' 'family environment,' 'sexual relations,' and 'social environment' sub-scales depending on the patients' level of education ($P < 0.05$).

It was determined that death anxiety was higher among individuals with a high-school education and that psychosocial adjustment was lower among literate individuals. No significant difference was seen in the mean scores for the PAIS-SR's other sub-groups ($P > 0.05$). A significant difference was identified in the PAIS-SR's total and 'professional environment,' 'sexual relations' and 'social environment' sub-scales depending on the patients' employment status ($P < 0.05$). It was determined that psychosocial adjustment was better among individuals who were working than those who did not work. No significant difference was seen in the DAS and the PAIS-SR's other

sub-groups ($P > 0.05$). No significant difference was seen in DAS or the total PAIS-SR and all its sub-groups for patients quitting their jobs due to illness ($P > 0.05$). The comparison of the patients' mean scores for the DAS and the Psychosocial Adjustment Sub-scales are given in [Table 3]. No statistically significant relationship was found between the DAS and the Psychosocial Adjustment Scale's 'Adjustment to Healthcare,' 'Professional Environment,' 'Sexual Relations,' 'Extended Family Relations,' 'Social Environment' and 'Psychological Pressure' sub-scales ($P > 0.05$). A positive correlation was found between the DAS and the total scores of the Family Environment and Psychosocial Adjustment Scales, the subscales of the Psychosocial Adaptation Scale ($P < 0.05$). As a result of the study, it was determined that COPD patients had moderate levels of death anxiety, that their psychosocial adjustment levels were low and that their social adjustment to the disease and life deteriorated as death anxiety increased.

DISCUSSION

In studies conducted using the DAS, 0–4 points were regarded as 'mild level,' 5–9 points as 'moderate level,' 10–14 points as severe and 15 points as 'panic level' of 'death anxiety.' In this study, the total mean score of the scale was found to be 6.96 ± 3.45 .

According to these values, it can be said that the death anxiety scores for the patients participating in the study are at a moderate level. In the study of Ince on COPD patients, the DAS's total score average was found to be 7.12 ± 3.15 .^[19] In the study of Ünsal and Yetkin, it was determined that 73% of individuals with COPD think more about dying after the disease, 28.6% desired to die and 13.9% experienced death anxiety.^[20] These results are similar to our study. Dyspnoea and shortness of breath cause panic, anxiety and death anxiety.^[8] The presence of moderate levels of death anxiety in COPD suggests that the patients' fear of not being able to heal and fear of suffocation are associated with chronic and severe respiratory problems. In studies conducted with PAIS-SR, scores lower than 35 were assessed as successful psychosocial adjustment, scores between 35 and 51 as moderate psychosocial adjustment and scores higher than 51 as unsuccessful adjustments. The PAIS-SR total score average for the patients who participated in our study was found to be 67.54 ± 14.96 . The patients' mean scores for the PAIS-SR sub-sections were found to be 8.63 ± 3.92 for adjustment to healthcare, 13.62 ± 2.62 for the professional environment, 10.52 ± 3.70 for the family environment, 10.22 ± 3.55 for sexual relations, 3.96 ± 2.37 for extended family relations, 12.81 ± 4.07 for the social environment and 7.75 ± 4.08 for psychological pressure. According to these figures, it can be said that patients who participated in the study had low psychosocial adjustment levels. In our study, the psychosocial adjustment scale's sub-scales that most affected the patients were professional environment,

Table 2: Death anxiety scale and psychosocial adjustment scale average scores by COPD patient's socio-demographic characteristics.

Characteristics	Scales											Total PAIS-SR X±SD	
	Death Anxiety Scale X±SD	PAIS-SR Sub-scales											
		Adjustment to Health Care X±SD	Professional Environment X±SD	Family Environment X±SD	Sexual Relations X±SD	Extended Family Relation X±SD	Social Environment X±SD	Psychological Pressure X±SD					
Age													
34-49 (12)	8.58±2.96	11.58±4.12	11.66±4.73	7.41±3.47	4.91±3.34	10.33±4.81	9.66±5.21	65.41±20.34					
50-65 (138)	6.81±3.46 t=1.708 P=0.090	13.80±2.39 t=-1.840 P=0.091	10.42±3.60 t=1.119 P=0.265	10.47±3.47 t=-2.922 P=0.004	3.88±2.27 t=1.448 P=0.150	13.02±3.95 t=-2.228 P=0.027	7.58±3.95 t=1.702 P=0.091	67.72±14.48 t=-0.511 P=0.610					
Gender													
Women (40)	8.57±3.17	14.42±2.37	12.92±3.85	11.42±2.52	5.30±2.22	13.70±3.11	9.32±3.83	76.22±13.18					
Men (110)	6.37±3.37 t=3.588 P=0.001	13.33±2.65 t=2.279 P=0.024	9.64±3.24 t=5.195 P=0.001	9.79±3.78 t=3.039 P=0.003	3.48±2.25 t=4.387 P=0.001	12.49±4.33 t=1.616 P=0.108	7.18±4.04 t=2.911 P=0.004	64.38±14.36 t=4.562 P=0.001					
Marital Status													
Unmarried (3)	9.00±1.00	12.66±4.04	10.00±4.35	12.66±4.04	3.66±2.51	12.00±5.19	9.00±2.64	70.00±13.11					
Married (113)	6.58±3.45	13.45±2.70	9.88±3.35	9.76±3.63	3.66±2.28	12.40±4.20	7.50±4.05	64.82±14.80					
Widowed (34)	8.02±3.34 F=2.894 P=0.059	14.29±2.15 F=1.566 P=0.212	12.67±4.05 F=8.164 P=0.001	11.52±2.91 F=4.073 P=0.019	5.00±2.44 F=4.335 P=0.015	14.23±3.23 F=2.756 P=0.067	8.47±4.26 F=0.872 P=0.420	76.35±12.28 F=8.593 P=0.001					
Place of Residence													
Province (64)	7.09±3.62	14.03±2.21	10.42±3.71	10.07±3.46	4.09±2.49	13.25±3.77	7.81±4.15	67.59±13.36					
District (41)	5.75±3.41	12.63±3.14	11.29±4.19	10.02±3.87	4.07±2.25	13.04±4.32	8.95±3.74	69.34±17.44					
Village (45)	7.86±2.95 F=4.268 P=0.016	13.95±2.45 F=4.226 P=0.016	9.95±3.12 F=1.445 P=0.239	10.62±3.43 F=0.396 P=0.673	3.68±2.34 F=0.436 P=0.647	11.97±4.21 F=1.390 P=0.252	6.57±4.04 F=3.765 P=0.025	65.82±14.83 F=0.591 P=0.555					
Educational background													
Literate (110)	7.16±3.41	14.16±2.16	11.02±3.54	11.06±3.03	4.06±2.29	13.47±3.58	7.67±3.92	70.29±13.02					
Primary school (25)	5.44±3.37	12.36±3.02	8.72±3.74	8.64±3.80	3.76±2.57	11.44±4.89	8.56±4.52	60.52±17.03					
High School (15)	8.00±3.31 F=3.398 P=0.036	11.80±3.50 F=9.918 P=0.001	9.80±4.00 F=4.463 P=0.013	6.73±3.88 F=15.169 P=0.001	3.60±2.72 F=0.361 P=0.698	10.26±4.68 F=6.197 P=0.003	7.00±4.56 F=0.761 P=0.469	59.06±18.47 F=7.638 P=0.001					
Working?													
Yes (11)	8.27±3.66	9.27±2.45	8.81±2.75	5.90±3.75	3.18±1.99	8.63±4.94	6.27±3.52	51.45±12.06					
No (139)	6.85±3.42 t=1.313 P=0.191	13.97±2.31 t=-6.452 P=0.001	10.65±3.74 t=-1.591 P=0.114	10.56±3.32 t=-4.432 P=0.001	4.02±2.40 t=-1.138 P=0.257	13.14±3.82 t=-3.678 P=0.001	7.87±4.11 t=-1.251 P=0.213	68.81±14.45 t=-3.873 P=0.001					
Quittheirjob?													
Yes (67)	6.80±3.39	13.47±2.89	10.29±3.27	9.77±3.66	3.91±2.59	12.79±4.31	7.07±4.27	66.04±15.00					
No (83)	7.08±3.51 t=-0.489 P=0.625	13.74±2.39 t=-0.612 P=0.542	10.69±4.03 t=-0.657 P=0.512	10.59±3.45 t=-1.397 P=0.164	4.01±2.20 t=-0.259 P=0.796	12.83±3.89 t=-0.060 P=0.952	8.30±3.86 t=-1.842 P=0.067	68.74±14.91 t=-1.100 P=0.273					

Table 3: The relationship between the death anxiety scale and the psychosocial adjustment scale.

Scales	
Psychosocial adjustment sub-scales	Death anxiety scale
Adjustment to health care	r=0.092 P=0.264
Professional environment	r=0.143 P=0.081
Family environment	r=0.195 P=0.017
Sexual relations	r=0.072 P=0.380
Extended family relations	r=0.083 P=0.312
Social environment	r=0.038 P=0.648
Psychological pressure	r=0.122 P=0.137
Total PAIS-SR	r=0.171 P=0.036

social environment, sexual relations, family environment, psychological pressure, adjustment to healthcare and extended family relations. The reason why the patients who participated in our study had low levels of psychosocial adjustment is thought to be COPD's characteristics as a chronic and progressive disease restricting life activities and causing physical and social limitations and dependence. No study investigating psychosocial adjustment in COPD individuals was found in the literature but the mean scores for PAIS-SR in studies made with other groups were 48.20 ± 23.915 in patients with type 2 diabetes mellitus, 43.12 ± 17.13 in patients with diabetic foot and 52.28 ± 19.73 in patients with heart failure.^[21-23] In addition, in these studies, the most affected sub-scales of severity were seen to bisexual relations, professional environment, social environment in Gündüz's study, adjustment to healthcare, professional environment, family environment in Öyke's study, sexual relationships, social environment, professional environment in Talaz's study, professional environment, social environment, psychological pressure in Durna and Akin's study, social environment, professional environment, adjustment to healthcare in Kaçmaz's study, family environment, social relationships and professional environment in Adaylar's study.^[11,12,21-24] When compared with other patient groups, it is concluded that COPD patients have lower psychosocial adjustment. In our study, when the patients' mean scores for DAS were examined by gender, death anxiety was found to be significantly higher in women than in men ($P < 0.05$). In the studies carried out by Çınar, Yıldız, İnce and Kırac, the mean scores for death anxiety were found to be significantly higher in female patients than in male patients.^[19,25-27] It is reported that the significant difference in death anxiety

scores according to gender could be caused by: (1) Biological inheritance and the effect of hormones, (2) socialization factors and the actions of men and women in the family and social environment influencing the child as role models and (3) the child copying and accepting the models that are taught.^[26] The fact that women feel death anxiety at greater levels than men makes us think that men are more inclined to adopt a mental approach to death while women are more inclined to adopt an emotional approach. In general, women are more emotional when compared to men.^[25] The mean score for DAS by the level of education was found to be significantly higher in patients with a high-school education than in patients who were literate and had only a primary school education ($P < 0.05$).

The level of anxiety increases as the level of education increases because of the increase in awareness and the ability to access information.^[28] When the mean scores for DAS by place of residence were examined, they were found to be significantly higher in people living villages than in people living in cities and districts ($P < 0.05$). The reason for death anxiety to be more severe in people living in rural areas than in people living in urban centres is thought to be that in rural areas life is simple and stable enough to question life and death while in urban centres the levels of contemplating death are low due to the intensity of work and daily life. In our study, when the mean scores for the PAIS-SR's 'sexual relations' and 'social environment' sub-scale scores were examined according to the age groups of the patients, it was found that the mean scores of the individuals aged 50–65 were significantly higher than the mean scores of the individuals aged 34–49 ($P < 0.05$). Parallel to our findings, the psychosocial adjustment was found to be lower among older patients in the studies by Gündüz and Adaylar.^[12,23] It is thought that the disabilities, limitations and dependence brought about by old age makes the psychosocial adjustment to illness lower. When we analysed the mean scores for the PAIS-SR's 'professional environment,' 'family environment,' 'sexual relations,' 'extended family relations' and 'psychological pressure' sub-scales according to the patients' gender, it was found that the mean scores for women were significantly higher than the mean score for men, meaning that women's adjustment was lower ($P < 0.05$). In the study by Firat, it was reported that adjustment to healthcare and total PAIS-SR adjustment scores were much lower for female patients than for male patients.^[29] In the study by Öyke on patients with behçet's disease, it was reported that the psychological pressure score was higher among women.^[24] This finding from our research may also be associated with women experiencing more anxiety. According to the marital status, it was found in our study that the mean scores for the PAIS-SR's 'adjustment to healthcare,' 'family environment,' 'extended family relations' sub-scales and the total PAIS-SR scores

were significantly higher in patients whose spouse had died while the mean scores for the 'sexual relations' sub-scale were significantly higher in single patients ($P < 0.05$).

In the study by Gündüz, it was found that psychosocial adjustment to illness was lower for unmarried patients.^[23] According to these findings, psychosocial adjustment to illness is higher in married patients than in unmarried patients and patients whose spouses died. This can be explained by the positive influence of the support provided by the family and spouse on psychosocial adjustment. When the mean scores for the PAIS-SR's 'professional environment' sub-scale were examined according to the place of residence, it was seen that they were significantly higher in individuals living in cities but when the mean scores for 'psychological pressure' were examined they were significantly higher in individuals living in districts ($P < 0.05$). In our study, the total PAIS-SR and the mean scores of the professional environment, family environment, sexual relations and social environment, which are the subscales of PAIS-SR, were found to be significantly higher in literate patients compared to primary and high school graduates ($P < 0.05$). It was found that the psychosocial adjustment, family environment, sexual relationships and social environment fields were more negatively affected in patients with low levels of education in patients with high levels of education. In this study, it was seen that the higher the level of education the more positive psychosocial adjustment was affected. In the study by Durnave Akın, it was reported that the higher the level of education the more positive psychosocial adjustment to illness was affected. It is reported that the level of education is positively correlated with adjustment and that higher education level increases adjustment.^[21] In our study, when the mean scores for the PAIS-SR's 'professional environment', 'sexual relations', 'social environment' sub-scales and total PAIS-SR scores were examined according to employment status, it was seen that the scores were significantly higher in unemployed patients than in employed patients ($P < 0.05$).

In Öyke's study, when the psychosocial adjustment to illness was examined according to employment status, it was found the mean scores for the 'professional environment' and 'extended family relations' as well as the total PAIS-SR scores were higher for the unemployed than for employed individuals and that a statistically significant difference existed between these groups ($P < 0.05$).^[24] It was reported that the negative influences in the professional environment were the reason why patients were frequently hospitalised and why they experienced economic problems. This situation leads to deterioration in psychosocial adjustment.^[21] It can be said that being well enough to work and being productive can have a remedial effect on psychosocial adjustment or that deterioration in psychosocial adjustment prevents individuals from working.

There are no studies in the literature examining the relationship between death anxiety and psychosocial adjustment in individuals with COPD. In our study investigating this relationship, a positive correlation was found between the total scores of the DAS and the psychosocial adjustment scale ($P < 0.05$). According to the results of our study, COPD patients were seen to have moderate levels of death anxiety and lower levels of psychosocial adjustment to illness and their psychosocial adjustment to the illness and life deteriorated as death anxiety increased. In the study by Öyke on patients with Behçet's disease and the study by Kaçmaz on patients with physical diseases, it was similarly found that psychosocial adjustment levels were significantly lower in patients with high anxiety scores.^[11,24] The emergence of a minor or serious illness can cause people to make significant changes to their lifestyles and plans and can even threaten their lives. Adjustment disorders are seen in people in this situation when they do not adapt their lifestyles and behaviours to fit the health problem they are experiencing. Failing to cope with the psychosocial problems encountered and failing to adapt to the changing situation can facilitate the onset of diseases while having any illness disrupts adjustment, leading to a vicious cycle adversely affecting the treatment of the disease.^[11] The attacks suffered by COPD patients, their breathing difficulties, their fear of not being able to breathe again, the sense of suffocation, such phobias as not being able to breathe if they fall asleep, their despair for the future and the significant changes made to the ideals and goals in their lives increase death anxiety and disrupt psychosocial adjustment. In our study, a positively significant relationship was found between the patients' DAS scores and the scores for the Psychosocial Adjustment Scale's 'Family Environment' sub-scale ($P < 0.05$). In other words, the family relationships of patients with high death anxiety scores deteriorate in psychosocial terms. In the study by Öyke (2008), it was found that adjustment to the PAIS-SR's 'family environment' sub-scale was lower in patients with a high risk of anxiety compared to patients with a lower risk of anxiety.^[24] The poor family relationships among individuals with high degrees of death anxiety may stem from the uncertainties, fears and despair for death being reflected in the family. Similarly, the reason for death anxiety is high in individuals who have problems with their family may be the inability of individuals to express their feelings, open themselves and find physical, psychological and social support.

CONCLUSION

- In light of the findings of this study: The provision of consultation services for coping with death anxiety for COPD patients, particularly women, those living in rural areas, those with high levels of education, those whose daily life activities are seriously hampered by the disease and those who do not receive support from those around them during the disease

- Support for the psychosocial problems and their solution, faced by COPD patients particularly the old, women, those with low levels of education, those who are not working, those who have had the disease for 5 years or more, those with a family history of COPD, those who have lost loved ones due to COPD, those who do not receive support from the people around them and those who do not receive a regular treatment
- The psychosocial evaluation of the patient in non-psychiatric clinics, training and support for the nurse who is going to take care of the patient; these are all the duties of the CLP nurse, who is an important member of the multidisciplinary team effort. Therefore, it is recommended to encourage the employment of CLP nurses who will work in coordination with the nurses working in non-psychiatric clinics in hospitals and expand graduate programs that train KLP nurses to provide this employment and to direct nurses to them
- It is also recommended to investigate this issue with a large sample of individuals with different cultural, religious and socioeconomic backgrounds.

Declaration of patient consent

Patient's consent not required as there are no patients in this study.

Financial support and sponsorship

Nil.

Conflicts of interest

There are no conflicts of interest

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How to cite this article: Togluk S, Çuhadar D. The effect of death anxiety on psychosocial adjustment in individual with chronic obstructive pulmonary disease. *Indian J Palliat Care* 2021;27:358-66.