RESEARCH ARTICLE

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Determination of Death Anxiety in Individuals with Chronic Obstructive Pulmonary Disease

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Abstract

BACKGROUND/AIMS: Chronic obstructive pulmonary disease (COPD) causes patients to experience a number of disturbing physical and psychological symptoms. One of these disorders is death anxiety. The purpose of this study was to determine death anxiety in patients with COPD.

MATERIALS AND METHODS: The study was conducted as a cross-sectional descriptive study. The study included 100 patients with COPD at a government hospital in the Turkish Republic of North Cyprus (TRNC) between January and May 2021. A Descriptive Information Form and the Templer Death Anxiety Scale were used to collect data. The t-test in independent groups and ANOVA analysis were used in the analysis of data that showed normal distribution, and the Mann-Whitney U test and the Kruskal-Wallis H test were used for data that did not show normal distribution.

RESULTS: The patients' mean scores on the Templer Death Anxiety Scale was high. A significant difference was found between mean scores for death anxiety according to patients' ages, duration of illness, meeting physical needs, and presence of another illness.

CONCLUSION: Death anxiety among individuals with COPD was high in the TRNC. The death anxiety level of patients should be determined during hospitalization, and support should be provided. It is also recommended that a study on death anxiety in individuals with COPD and related factors be conducted in the TRNC with a wider sample.

Keywords: Chronic obstructive pulmonary disease, death anxiety, COPD patients

INTRODUCTION

Chronic obstructive pulmonary disease (COPD) is a significant and increasing cause of morbidity and mortality worldwide. According to World Health Organization data, COPD caused the death of 3.17 million people in 2015 and was the cause of 5% of all deaths.[1] According to the Turkish Chronic Diseases and Risk Factors Study, the prevalence of COPD in Türkiye is 5.3%.[2] According to 2017 data from the Turkish Statistical Institute (TURKSTAT), chronic respiratory system diseases are in third place among diseases that are the cause of death.[3] In the Turkish Republic of North Cyprus, there are insufficient records and spirometric measurements, so there are no studies or official data.

COPD causes patients to experience a series of physically and psychologically disturbing symptoms. As the disease progresses, patients experience changes in both functional and cognitive performance.[4] The clearest physical signs of COPD are shortness of breath, coughing, and

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the production of phlegm. Shortness of breath results in a restriction in patients' daily activities, a decline in their quality of life, and anxiety.[5-8]

It has been stated that the incidence of signs of anxiety in patients with COPD varies from 2 to 50%.[9] Many studies conducted in Türkiye and around the world, show that COPD patients experience anxiety.[4,8,10-12] Shortness of breath is the basic cause of anxiety in individuals with COPD.[13] In a study by Kapısız and Eker[14] it was stated that severe shortness of breath was an important predictor of anxiety in patients with COPD. In particular, air hunger occurring with shortness of breath caused anxiety that approached panic in patients, and with it, a "fear of death".[15]

Death is defined in the Turkish Language Society's Dictionary of Biological Terms as "the end of all life events in living things, not starting again". The Large Turkish Dictionary defines it as "the complete and definite end of life of a person, animal or plant, the journey to the afterlife, eternal sleep". Death anxiety does not have a universal definition that is accepted by everyone.[16]

It has been reported that the anxiety experienced along with difficulty breathing causes death anxiety in COPD patients.[8] In studies by İnce[17], Güçlü[18], Demir-Gökmen and Fırat[19] it is stated that patients with COPD experienced death anxiety to a medium level. In another study, it was emphasized that patients with COPD experienced death anxiety at a high level.[11] In a qualitative study, it was revealed that patients with COPD experience death anxiety. The patients stated that the inability to get enough air caused death anxiety and that this anxiety limited their daily lives.[8]

Studies relating to COPD have shown that in patients with anxiety, the risk of widespread anxiety disorder,[20,21] exacerbation of the illness,[22] and death are high.[23] Therefore, it is important to evaluate the death anxiety of these patients to provide support in coping with death anxiety and to protect their psychological well-being and quality of life. Nurses play an important role in supporting patients in coping with death anxiety and protecting their psychological well-being. Understanding patients' death anxiety will help nurses plan patient care. No scientific data on this topic have been found in the Turkish Republic of North Cyprus. Therefore, the purpose of this study was to determine death anxiety in patients with COPD. It is considered that the results of this study will contribute to the literature on the topic in the country and will serve as a guide for further studies on COPD and death anxiety. This study is also considered important in terms of raising awareness among nurses who are responsible for managing the death anxiety experienced by patients with COPD and using the data obtained in nursing care.

Research questions

- What is the level of death anxiety in patients with COPD?

- Does death anxiety differ according to sociodemographic and illness-related characteristics of patients with COPD?

MATERIALS AND METHODS

The type of Study

This was a cross-sectional study.

Setting

The study was conducted between January and May 2021 in the lung disease department of a government hospital in the TRNC.

Sample

The sample of the study was made up of patients with COPD who visited the lung disease service of the hospital. Because the number of patients in the study population was unknown, hospital records were examined, and it was found that 137 patients were admitted to the hospital for treatment in 2018 and 2019. This was taken as a reference for determining the sample number, and the sample calculation formula for a known population was used. The sample was determined using a simple random sampling method. According to this, it was found that out of the 137 people in the population, only 100 had to be interviewed for a confidence interval (CI) of 95% and a 5% sampling error. As a result of the post hoc power analysis performed with a 95% CI and a 5% sampling error, it was found to be 99%.

Data Collection Instruments

A Descriptive Information Instrument made up by the researcher in line with the literature[11,17,18,25,26] and the Templer Death Anxiety Scale were used to collect data. There are 20 questions in the Descriptive Information Instrument, including the patients' sociodemographic characteristics and illness information.

The Death Anxiety Scale was developed by Templer[24], and Turkish validity-reliability work was conducted by Akça and Köse.[25] The model comprises 15 items with true-false responses. Those with a total score of 7 are considered to have high death anxiety. In the adaptation study, the Cronbach's alpha value of the scale was 0.75, whereas in the present study, it was 0.84.

Data Collection

Data were collected from patients in the lung disease service who volunteered to participate. The data were collected by one of the researchers between January and May 2021. This researcher works as a clinical nurse in a similar service. The researcher collected data face-to-face from the inpatients. The researcher asked questions and the patient answered.

Ethical Considerations

Regarding the ethical aspects of the study, consent to carry out the study was obtained from the Scientific Research Ethics Committee of the European University of Lefke (approval number: ÜEK/56/01/12/2021/04, date: 02.12.2020), and institutional permission was obtained from the hospital. Verbal and written informed consent was obtained from patients who volunteered to participate.

Statistical Analysis

The Kolmogorov-Smirnov and Shapiro-Wilk tests were used to assess whether the data conformed to normal distribution. In the analysis of data with normal distribution, the t-test in independent groups and ANOVA analysis were used, whereas the Mann-Whitney U test and the Kruskal-Wallis H test were used in the analysis of data that did not show normal distribution. The Statistical Package for Social Sciences (SPSS) 25.0 software was used for data analysis.

RESULTS

Table 1 shows the distribution of patients who agreed to participate in the study according to their sociodemographic characteristics.

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Table 1 shows that 37% of the participants were aged between 66 and 75 years, 64% were male, 74% were married, 37% lived in a village, 86% were not working, 57% were retired, 60% did not smoke, and 78% had another chronic illness.

Table 2 presents the distribution of patients according to certain characteristics related to their illness.

It is seen that the starting age of the illness of 39% of the patients included in the study was 59 years, 42% had had the illness for 6-14 years, 92% had received information on the illness, and of those (n=92), 83.75% had received information from a doctor, 31.5% from a nurse, 22.8% from television, a magazine or a book, and 9.8% from the internet. It is also seen that 36% of those participating in the study

could partially meet their physical needs, 65% were able to comply with treatment, 38% had been admitted to hospital four times or more, 72% had a history of COPD in their family, and 90% had received help or support regarding the illness, 63.3% from their partners and 71.1% from their children (Table 2).

Table 1. Distribution of participants by socio-demographic characteristics (n=100)		
	n	Percentage (%)
Age group		
65 years or less	35	35.0
66-75 years	37	**37.0**
76 years	28	28.0
Gender		
Female	36	36.0
Male	64	**64.0**
Marital status		
Single	13	13.0
Married	74	**74.0**
Divorced/separated/widowed	13	13.0
Place of residence		
City	34	34.0
Town	29	29.0
Village	37	**37.0**
Work status		
Working	14	14.0
Not working	86	**86.0**
Profession		
Office worker	3	3.0
Manual worker	10	10.0
Tradesman	3	3.0
Retired	57	**57.0**
Other	27	27.0
Smoking status		
Smoking	40	40.0
Not smoking	60	**60.0**
Other chronic illnesses		
Yes	78	78.0
No	22	22.0
Illness (n=78)*		
Hypertension	56	71.8
Diabetes	39	50.0
Heart disease	30	38.5
Other	13	16.7
*More than one was selected.		

Table 2. Distribution of participants according to various illness-related characteristics (n=100)		
	n	Percentage (%)
Age at onset of illness		
59 years or less	39	**39.0**
60-69 years	31	31.0
70 years or more	30	30.0
Duration of illness (years)		
5 years or less	41	41.0
6-14 years	42	**42.0**
15 years or more	17	17.0
Receipt of information about an illness		
Yes	92	**92.0**
No	8	8.0
Source of information (n=92)*		
Doctor	77	**83.7**
Nurse	29	31.5
TV/magazine/book	21	22.8
Internet	9	9.8
Ability to meet physical needs		
Not at all.	31	31.0
Partially	36	**36.0**
Completely	33	33.0
Compliance with treatment		
Yes	65	**65.0**
No	35	35.0
Number of hospital admissions		
This is the first time	28	28.0
This is the second time	18	18.0
This is the third time	16	16.0
Four times or more	38	**38.0**
Family history of COPD		
No	28	28.0
Yes	72	**72.0**
Receipt of illness-related help or support		
Yes	90	**90.0**
No	10	10.0
Person providing illness-related help or support*		
Partner	57	63.3
Children	64	**71.1**
Sibling	10	11.1
Friend	5	5.6
Psychologist/psychiatrist	8	8.9
Mother/father	2	2.2
Other	2	2.2
*More than one was selected. COPD: Chronic obstructive pulmonary disease.		

The patients' mean Templer Death Anxiety Scale was found to be 10.31±3.66. Table 3 shows the participants' median Templer Death Anxiety Score according to their characteristics. A significant difference was found between the patients' median Templer Death Anxiety Scale scores according to age, duration of their illness, status of meeting physical needs, and whether they had another chronic disease. The difference relating to age is derived from the 65 years and below age group. The median death anxiety scores of individuals who had been ill for 15 years or more were significantly higher than those of the other two groups. The median death anxiety scores of patients who were completely unable to meet their physical needs were significantly higher than those of patients who were able to meet their physical needs partially or completely. Furthermore, the median death anxiety scale scores of patients who were able to partially meet their physical needs were significantly higher than those of patients who were able to meet their physical needs completely. No difference was found between the median death anxiety scale scores of the patients according to other characteristics.

Table 3. Comparison of Templer Death Anxiety Scale scores according to participants' characteristics (n=100)

Variable	Category	n	Templer Death Anxiety Scale Scores			
			Median	Mean rank	Significance	Difference
Age	65 years or less	35	8.00	38.66	$X^2=9,097$ **p=0.011***	1-2 1-3
	66-75 years	37	12.00	56.32		
	76 years	28	12.00	57.61		
Gender	Female	36	11.00	53.29	Z=-0.725 p=0.468	
	Male	64	11.00	48.93		
Marital status	Single	13	9.00	38.31	$X^2=2.666$ p=0.264	
	Married	74	11.00	52.32		
	Divorced/separated/widowed	13	11.00	52.35		
Place of residence	City	34	11.00	53.28	$X^2=1.347$ p=0.510	
	Town	29	10.00	45.33		
	Village	37	11.00	52.00		
Work status	Working	14	8.00	44.96	Z=-0.774 p=0.439	
	Not working	86	11.00	51.40		
Smoking status	Smoking	40	10.50	49.83	$X^2=-0.191$ p=0.849	
	Not smoking	60	11.00	50.95		
Age at onset of illness	59 years or less	39	8.00	42.46	$X^2=5.442$ p=0.066	
	60-69 years	31	12.00	53.11		
	70 years or more	30	12.00	58.25		
Duration of illness	5 years or less	41	9.00	46.00	$X^2=8.594$ **p=0.014***	1-3 2-3
	6-14 years	42	11.00	47.35		
	15 years or more	17	14.00	69.15		
Receipt of information	Yes	92	11.00	49.65	Z=-0.996 p=0.319	
	No	8	13.00	60.25		
Ability to meet physical needs	Not at all	31	13.00	60.89	$X^2=7,626$ **p=0.022***	1-2 1-3 2-3
	Partly	36	10.50	50.31		
	Completely	33	8.00	40.95		
Compliance with treatment	Yes	65	10.00	48.47	Z=-0.959 p=0.338	
	No	35	12.00	54.27		
No. of hospital admissions	One	28	10.50	49.02	$X^2=2,127$ p=0.547	
	Two	18	11.50	57.75		
	Three	16	11.00	54.06		
	Four or more	38	9.00	46.66		
Family history of COPD	No	28	9.00	46.55	Z=-0.853 p=0.394	
	Yes	72	11.00	52.03		
The presence of another chronic illness	Yes	78	12.00	56.47	Z=-3,893 **p=0.001***	
	No	22	7.00	29.34		
Receipt of support for illness	Yes	90	11.00	52.28	$X^2=-1,854$ p=0.064	
	No	10	7.00	34.45		
*p<0.05.						

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DISCUSSION

The purpose of this study was to determine death anxiety in patients with COPD, and the results are discussed in line with this.

The patients in this study had high death anxiety scores (10.31±3.66). There are studies that support our findings and show that patients with COPD have a high level of death anxiety.[11,17-19,26,29,30] In patients with COPD, severe difficulty in breathing is generally accompanied by anxiety. In addition, problems such as chronic coughing, loss of appetite, weight, insomnia, and fatigue diminish quality of life and increase death anxiety.[27] Additionally, it is stated in the literature that anxieties specific to disease are indicators of a fear of death,[28] that patients report that the symptoms they experience are related to their illness, and that as symptoms increase, death anxiety also increases.[19] It is known that COPD causes physical and psychosocial problems. Individuals are negatively affected by these problems. This condition causes the development of death anxiety.[29]

Some studies in the literature have shown that death anxiety increases with age, but others have shown that it is higher in the young. In a study by Güçlü[18], no difference was found between the mean death anxiety scores of patients with COPD according to their age. İnce[17] also, in a study with patients with COPD, found no correlation between age and death anxiety. In a study by Toğluk and Çuhadar[26], no difference was found between mean death anxiety scores according to age, and the greatest age in this group was 65 years old. In our study, a significant difference was found between the mean death anxiety scores of patients according to age. Death anxiety was significantly lower among those aged below 65 than among the other two groups. Thus, it can be concluded that death anxiety increased with advancing age in our study. Different results concerning death anxiety showed that death anxiety is related to many factors and cannot be explained by age alone.

When the patients' death anxiety was examined according to sex in our study; it was found that there were no differences between the mean scores of death anxiety. Other studies conducted with patients with COPD have found that the death anxiety of women was significantly higher than that of men.[11,17,18,25,31] These results can be supported by the fact that females express their feelings more easily than males. In addition, in some cultures, social roles require men to give an image of being strong and not afraid of anything. The lack of gender difference may be explained by cultural, role, and social life differences in the TRNC, where this study was conducted. More data on this topic are needed from the TRNC.

There are different results in the literature regarding the effect of marital status on death anxiety. Some studies, similar to our study, have shown that there is no difference between the mean death anxiety scores of patients according to marital status.[11,18] On the other hand İnce[17] reported that death anxiety was higher in those who were married than in those who were single. The reason why married individuals have higher death anxiety than single individuals may be that married individuals have more responsibilities toward their spouses and children. In our study, it can be said that variables that were significant, such as age, the presence of another disease, and ability to meet individual needs, may be more effective.

When elderly people living in villages have serious health problems, reaching hospitals or units where they can obtain help is more difficult

than in other settlements. When they encounter such a problem, the anxiety they feel due to not being able to help may increase their death anxiety. Some study results also showed that the death anxiety of those living in a village was significantly higher than that of people living in a town or city.[26,32] The present study was conducted in the TRNC, where even the furthest parts of the island can be reached within 90 minutes from the hospital in Lefkoşa. This may explain the lack of difference in mean death anxiety scores according to place of residence. There were no regional differences in receipt of medical assistance or access to 112 emergency services.

It has been observed that studies examining death anxiety according to working status are limited.[17,26] Working life can make an individual feel valuable by creating an environment where they can take responsibility and produce. Leaving behind a legacy or effort can be an important factor in alleviating death anxiety. Conversely, working life may increase death anxiety by preventing individuals from receiving regular treatments. In the present study, there were no differences in mean death anxiety scale scores according to the patients' working status. It is thought that qualitative and quantitative studies examining this variable are needed.

Lengthening the illness duration, increasing symptoms, and increasing additional chronic illnesses may cause death anxiety. In addition, as the duration of illness increases, patients may experience more difficulties in managing symptoms, which may trigger death anxiety. The finding that death anxiety was higher in patients with longer disease durations in our study can be explained in this way. Death anxiety also increased as the illness duration increased. The findings of our study are similar to those of Nal et al.[11], Genç[30], Görpüz and Kıssal.[31] The longer the disease duration, the higher the number of hospitalizations. Increased hospitalization may increase mortality anxiety. In our study, there was no difference in the mean death anxiety scores of patients according to the number of hospitalizations. This can be explained by patients adapting to the disease by admission to hospitals, and admission to hospitals gives them confidence.

Lack of information is a factor that causes patients to experience death anxiety. It is thought that informing patients about the disease will be effective in managing the disease and anxiety. Güçlü[18] reported that patients who had COPD and received information on self-care had a significantly lower level of death anxiety. In our study, the mean death anxiety scores of patients who had not received information on their illness were high, but there was no difference between the mean scores of the groups that had or had not received information. It can be concluded that the quality of the received information is important.

Dyspnea, one of the most prominent symptoms of COPD, may increase over time and limit the individual's ability to meet physical needs.[19] These limitations affect the patient psychologically over time and may cause anxiety and death. This can be explained by increased dependence on factors such as oxygen treatment as the disease advances, triggering death anxiety. Meeting patients' physical needs gives them confidence and decreases their stress and death anxiety levels. Similarly, in our study, we found that death anxiety was significantly higher in those whose physical needs were not met than in those whose physical needs were partially or completely met. The findings of İnce[17] support our findings.

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Death anxiety is a subjective feeling. It is believed that there may be many individual and environmental factors affecting this anxiety. The lack of difference between the mean death anxiety scores of the patients according to the presence of a person with COPD in the family can be explained in this way. Toğluk and Çuhadar[26] support our findings.

Chronic diseases do not fully heal, progress slowly, and often cause permanent damage. Studies have shown that death anxiety is high in patients with chronic diseases.[33] It has been stated that the presence of another chronic disease is an important determinant of stress in patients with COPD and that perceived stress has a positive and significant relationship with death anxiety.[30] The emergence of symptoms of another chronic disease in addition to COPD and patients' insufficient coping skills regarding these symptoms may be a factor that increases death anxiety. Every symptom can be perceived by patients as a life-threatening factor. Therefore, the presence of another chronic disease may increase death anxiety. Similarly, in our study, a significant difference was found between the patients' mean death anxiety scores according to the presence of another chronic illness. Güçlü[18] reached similar conclusions.

Study Limitations

The limitations of the study are that it was conducted in a hospital, and the scales used were self-reported. This study can only be generalized to this sample group.

CONCLUSION

The results of the study revealed that the mortality anxiety of patients with COPD was high. A significant difference was found between the mean death anxiety scores of patients according to age, duration of illness, whether physical needs were met, and presence of another chronic disease. It is thought that this study will contribute important data to the literature because it was conducted with this sample from the TRNC. These results will guide TRCN nurses about the psychosocial needs of patients with COPD. Nurses will have awareness of the evaluation of patients with COPD, not only physically but also psychosocially. It is recommended that the death anxiety of patients with COPD and related factors be studied with a wider sample from the TRNC. At the same time, it is recommended that patients with COPD be assessed for death anxiety and that suitable nursing approaches be planned for those with death anxiety.

MAIN POINTS

• Chronic obstructive pulmonary disease (COPD) causes patients to experience a number of physical and psychological symptoms. One of these disorders is death anxiety.

• There are no scientific data on this topic in the Turkish Republic of North Cyprus (TRNC).

• Death anxiety is high among patients with COPD in the TRNC.

• Death anxiety among patients with COPD and related factors should be studied with a wider sample from the TRNC.

ETHICS

Authorship Contributions

Concept: M.Ç., P.T., Design: M.Ç., D.B., P.T., Data Collection and/or Processing: M.Ç., Analysis and/or Interpretation: M.Ç., D.B., Literature Search: D.B., P.T., Writing: M.Ç., D.B., P.T.

DISCLOSURES

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