



RESEARCH

LEVEL OF CORONAPHOBIA IN OLDER ADULT PATIENTS

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ABSTRACT

Introduction: Coronaphobia is defined as a specific phobia of the novel coronavirus in the coronavirus disease 2019 (COVID-19) pandemic. This study aimed to evaluate the level of coronaphobia caused by the COVID-19 pandemic in older adult patients with musculoskeletal problems who visited an outpatient clinic and to compare the results with those of patients under 65 years of age. Our secondary aim was to determine whether the level of coronaphobia in older adult patients is related to their sociodemographic characteristics.

Materials and Methods: This single-center, descriptive study was conducted between January 2022 and March 2022. A total of 100 patients who visited the physical therapy and rehabilitation outpatient clinic due to musculoskeletal problems were included in the study. The patients were divided into two groups. Group 1 (n=50; 39 females, 11 males) comprised patients aged ≥ 65 years. Group 2 (n=50; 36 females, 14 males) comprised patients aged < 65 years. Sociodemographic data of the patients were recorded. All patients in both groups completed the COVID-19 Phobia Scale (C19P-S).

Results: The C19P-S total score and the psychological, psychosomatic, social, and economic subscale scores were significantly higher in the older adult patient group than in the control group ($p < 0.001$). Additionally, no significant relationship was found between the level of coronaphobia and sociodemographic characteristics in the older adult patient group ($p > 0.05$).

Conclusion: Our results showed that older adult patients had higher levels of coronaphobia. Early recognition of coronaphobia in older adult patients, and making interventions for its treatment are important.

Keywords: Phobias; Pandemics; COVID-19; Aged

INTRODUCTION

The coronavirus disease 2019 (COVID-19), which started in Wuhan, China, in December 2019 and spread rapidly worldwide, has been declared a global pandemic on March 11, 2020, by the World Health Organization (1). The COVID-19 pandemic has had several negative effects, especially in the social, psychological, and economic fields worldwide. Especially in the periods when the pandemic peaked, its effect and mortality increased, and restrictions were imposed in the countries one after another. Due to these restrictions, individuals have been seriously affected psychologically. In addition, the long-term isolation of individuals at home, concerns about the future, and increasing economic problems due to social restrictions negatively affected the mental health. While the impact of COVID-19 on mental health remains to be determined, there are clues in the literature that may help us begin to understand what to expect (2). For example, during the Ebola outbreak, fear-related behaviors increased the rates of psychiatric symptoms both individually and collectively, contributing to an increase in indirect deaths from causes other than Ebola (3).

Specific phobia is defined as an excessive, irrational fear of a specific object or situation that is avoided at all costs or endured with great distress (4). Coronaphobia is a specific phobia caused by the novel coronavirus during the COVID-19 pandemic (2). Coronaphobia has been shown to be strongly associated with depression, anxiety, hopelessness, and suicidal ideation (5-7).

Older adults are most vulnerable to the COVID-19 outbreak due to higher mortality than the younger population (8). Countries have generally taken more stringent measures for the elderly population due to higher mortality rates. Social isolation may cause depression, anxiety, and other mental health problems at a higher rate in older adults

(9,10). We can say that older adults are more affected by the negative effects of the COVID-19 pandemic due to the high mortality rates and countries taking stricter measures with the instinct of protection.

In the current study, we aimed to evaluate the level of coronaphobia caused by the COVID-19 pandemic in older adult patients with musculoskeletal problems who were treated at an outpatient clinic and to compare the results with those of patients aged under 65 years. Our secondary aim was to determine whether the level of coronaphobia in older adult patients is related to their sociodemographic characteristics.

MATERIALS AND METHODS

This single-center, descriptive study was conducted between January 2022 and March 2022. A total of 100 patients (75 females and 25 males) who visited the physical therapy and rehabilitation outpatient clinic due to musculoskeletal problems were included in the study.

The patients were divided into two groups. Group 1 (n=50; 39 females, 11 males) comprised patients aged ≥ 65 years who visited the outpatient clinic with musculoskeletal problems. Group 2, the control group (n=50; 36 females, 14 males) comprised patients aged < 65 years who visited the outpatient clinic with musculoskeletal problems.

Patients aged < 18 years, with aphasia, illiteracy, and inability to complete the questionnaires due to an impaired cognitive status were not included in the study. Sociodemographic data (age, sex, educational level, and marital status) of all patients were recorded. The COVID-19 Phobia Scale (C19P-S) was used to evaluate patients' coronaphobia levels. The data were collected by a co-researcher.

The C19P-S is a five-point Likert type scale. One point indicates "complete disagreement," and five points indicate "complete agreement." The scale



is evaluated on psychological, psychosomatic, social, and economic subscales. Total scale scores are obtained by summing the subscale scores. A minimum index score of 20 points indicates the lowest coronaphobia, and 100 indicates the highest coronaphobia. The validity and reliability of the C19P-S in the Turkish population have been examined (11). Cronbach's alpha coefficient of the original scale is 0.82 (12). In our study, Cronbach's alpha was 0.80. The reliability coefficient of the C19P-S in this study was similar to that in the validity and reliability study of the scale.

This study was approved by the Clinical Research Ethics Committee of Bursa Uludag University (approval number: 2022-2/17), and written informed consent was obtained from all participants.

Statistical analysis

The Shapiro-Wilk test was used to assess whether the variables followed a normal distribution. Continuous variables are presented as median

(minimum-maximum) values. Categorical variables are reported as n (%). According to the normality test results, the Mann-Whitney U test was used to compare the two groups. Pearson's chi-square test was used to compare categorical variables. Multiple linear regression analysis was performed to estimate the C19P-S score. Variables were included in the multiple linear regression model using the entry method. The multiple linear regression model was not found to be significant ($p > 0.05$). SPSS (IBM Corp. Released 2012. IBM SPSS Statistics for Windows, Version 21.0, Armonk, NY: IBM Corp.) was used for statistical analysis, and p -value < 0.05 was considered statistically significant.

RESULTS

The sociodemographic characteristics of the participants are presented in Table 1. There was no significant difference between the older adult patient and control groups in terms of sex, educational status, and marital status ($p > 0.05$).

Table 1. Sociodemographic characteristics of the participants

	Older adult patient group (n=50)	Control group (n=50)	p-value
Age	71(65-81)	49(32-64)	<0.001^a
Sex			
Women	39(78%)	36(72%)	0.488 ^b
Men	11(22%)	14(28%)	
Educational status			
Primary school	33(66%)	26(52%)	0.235 ^b
High school	4(8%)	9(18%)	
Bachelor's degree	13(26%)	15(30%)	
Marital status			
Married	28(56%)	31(62%)	0.542 ^b
Single	22(44%)	19(38%)	

Data are expressed as n (%) or median (minimum-maximum). a: Mann-Whitney U test, b: Pearson's chi-square test

Table 2. Comparison of C19P-S scores of groups

C19P-S Score	Older adult patient group	Control group	p-value ^a
Psychological	20(12-25)	14(10-19)	<0.001
Psychosomatic	10(7-14)	8(5-13)	<0.001
Social	18(10-23)	12(5-17)	<0.001
Economic	10.50(7-18)	7(4-14)	<0.001
Total	59.50(37-71)	41(25-63)	<0.001

Data are expressed as median (minimum-maximum). C19P-S: Coronavirus disease 2019 Phobia Scale; a: Mann-Whitney U test

The results for C19P-S are presented in Table 2. Accordingly, the C19P-S total score and all subcategory scores in the older adult patient group were significantly higher than those in the control group ($p < 0.001$).

The relationship between total C19P-S scores and sociodemographic characteristics in the older adult patient group is shown in Tables 3 and 4. There was no significant relationship between the total C19P-S scores and sociodemographic characteristics ($p > 0.05$).

Table 3. The relationship between the total C19P-S scores and sociodemographic characteristics in the older adult patient group

	Total C19P-S score	p-value ^a
Sex		
Women	60(37-71)	0.639
Men	58(47-65)	
Educational status		
Primary school	59(37-71)	0.807
High school	59(51-63)	
Bachelor's degree	60(47-64)	
Marital status		
Married	60(38-66)	0.638
Single	58(37-71)	

Data are expressed as median (minimum-maximum). C19P-S: Coronavirus disease 2019 Phobia Scale; a: Mann-Whitney U test

DISCUSSION

In the current study, we compared the levels of coronaphobia in older adult patients with those in patients aged <65 years. Results showed that the level of coronaphobia was significantly higher in older adult patients than in the control group. In addition, according to the results of the current study, the level of coronaphobia in older adult patients was not found to be associated with their sociodemographic characteristics.

In a study evaluating COVID-19 phobia and the feeling of loneliness in the geriatric age group, a total of 130 elderly individuals (80 females, 50 males) were included in the study. The mean age of the participants was 71.53 ± 5.57 years (range: 65-87 years). As a result of the study, a moderate positive correlation was found between age and the total loneliness score; however, no significant correlation was found between the total coronaphobia score and age (13). Karaaslan et al. in a study in which they investigated the potential risk factors associated with coronaphobia in adults, no significant correlation was found between the C19P-S scores and age (14). In a study examining the level of coronaphobia and related factors of 736 nurses working in health centers treating patients with COVID-19 in the Philippines, a positive correlation was found between the age of the nurses and their coronavirus anxiety levels (15). In a study investigating immediate psychological responses and associated factors in

**Table 4.** Factors related total C19P-S scores in the older adult patient group

	Unstd. B	Std. error	t	95% Confidence Interval for B		p-value
				Lower bound	Upper bound	
Constant	58.20	5.97	9.75	46.19	70.22	<0.001
Sex	-0.45	2.79	-0.16	-6.06	5.17	0.874
Educational status	0.27	1.24	0.22	-2.23	2.77	0.828
Marital status	-0.15	2.34	-0.06	-4.86	4.56	0.950

n=50, $R^2=0.002$, Adj. $R^2=-0.063$
($F=0.026$, $p=0.994$)

C19P-S: Coronavirus disease 2019 Phobia Scale; Unstd: unstandardized; Std: standard

the early phase of the COVID-19 epidemic in China, 1210 participants from 194 cities were included. No significant relationship was found between age, parenting status, marital status, household size, and the Depression, Anxiety, and Stress Scale-21 (16). In the current study, the level of coronaphobia was higher in older adult patients than in younger patients. According to the literature, this difference may have been because the current study was conducted at a later period, and most of the deaths due to COVID-19 were determined precisely in elderly patients. In addition, most studies in the literature have not compared, elderly and younger patients. The large age difference between the two groups in the current study may also have contributed to the difference in the results from the literature.

In a study by Erdem et al. in which coronaphobia was evaluated in patients with cancer, 300 patients were included. According to the results of this study, no significant differences were found between the patients' age, education level, employment status, and C19P-S scores. The psychological, psychosomatic, and economic sub-dimensions of the C19P-S and the total C19P-S scores of women were significantly higher than those of men. Single patients' C19P-S psychosomatic subgroup scores were sig-

nificantly higher than those of married patients (17). In a study investigating coronaphobia risk factors in adult patients, female sex, being married, having a chronic illness, staying at home, and accompanying sleep disorders were associated with high coronaphobia scores (14). Abdelghani et al. investigated the factors affecting the level of coronaphobia among physicians. In total, 426 physicians were included in this study. The study found that the level of coronaphobia was higher in physicians who were females, non-smokers, had a death wish and/or self-harm thoughts, had inadequate training, were not satisfied with their personal protective equipment, and those whose colleagues had COVID-19 (18). Contrary to the literature, in the current study, sociodemographic characteristics (sex, marital status, and educational status) and the level of coronaphobia were not found to be related. The difference between the current study and the literature may be due to the high mean age of the study population, different patient selection criteria, and insufficient sample size.

The current study has some limitations. The main limitation of this study is its small sample size. In addition, the lack of patient sociodemographic data may not have considered certain parameters

that may affect coronaphobia. Large-scale, long-term, prospective studies are needed to better understand the cause-and-effect relationships.

In conclusion, our study results suggest that older adult patients have higher levels of coronaphobia. Early recognition of coronaphobia in older adult patients, and making interventions for its treatment are important. We believe that this study will contribute to the literature by addressing the level of coronaphobia in older adult patients and the factors affecting it.

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Competing interest

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