



ORIGINAL ARTICLE

Factors Affecting Quality of Life in Elderly People During the COVID-19 Pandemic: A Cross-sectional Study

COVID-19 Salgını Sırasında Yaşlılarda Yaşam Kalitesini Etkileyen Faktörler: Kesitsel Bir Çalışma

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Abstract

Objective: This study aims to help reduce the fears and anxieties of older people and improve their quality of life by guiding health and social care services and education for older people.

Method: The sample of the study consisted of 154 elderly people who voluntarily participated in the study between March and May 2021. Research data were collected online with "personal information form", "fear of Coronavirus disease-2019 (COVID-19) scale", "coronavirus anxiety scale" and quality of life scale in older people.

Results: The mean age of the older people who participated in the study was 71.44±6.28. The mean coronavirus anxiety scale score of the elderly is 4.39±4.58, the mean fear of COVID-19 scale score is 21.91±7.22 and the mean quality of life scale in older people score is 21.25±7.53.

Conclusion: In our study, it was determined that the elderly were afraid of contracting COVID-19 infection, experienced anxiety, and their quality of life was found to be moderate. In addition, age, fear, anxiety and education level were found to be predictors of quality of life in the elderly. Elderly individuals should be provided with physical, emotional, psychological and social support and support health policies should be developed for this.

Keywords: COVID-19, fear, anxiety, aged

Öz

Amaç: Bu çalışma, yaşlılara yönelik sağlık ve sosyal bakım hizmetleri ile eğitime rehberlik ederek yaşlıların korku ve kaygılarının azaltılmasına ve yaşam kalitelerinin iyileştirilmesine yardımcı olmayı amaçlamaktadır.

Yöntem: Araştırmanın örneklemini Mart-Mayıs 2021 tarihleri arasında çalışmaya gönüllü olarak katılan 154 yaşlı oluşturmıştır. Araştırma verileri "kişisel bilgi formu", "Koronavirüs hastalığı-2019 (COVID-19) korkusu ölçeği", "koronavirüs anksiyete ölçeği" ve "yaşlılarda yaşam kalitesi ölçeği" ile çevrimiçi olarak toplanmıştır.

Bulgular: Araştırmaya katılan yaşlıların yaş ortalaması 71,44±6,28 idi. Yaşlıların, koronavirüs anksiyete ölçeği puanı ortalaması 4,39±4,58, COVID-19 korkusu ölçeği puanı ortalaması 21,91±7,22 ve yaşlılarda yaşam kalitesi ölçeği puanı ortalaması 21,25±7,53'tür.

Sonuç: Çalışmamızda yaşlıların COVID-19 enfeksiyonuna yakalanmaktan korktukları, kaygı yaşadıkları ve yaşam kalitelerinin orta düzeyde olduğu belirlendi. Ayrıca yaş, korku, anksiyete ve öğrenim düzeyinin yaşlılarda yaşam kalitesinin yordayıcıları olarak bulunmuştur. Yaşlı bireylere fiziksel, duygusal, psikolojik ve sosyal destek sağlanmalı ve bunun için destek sağlık politikaları geliştirilmelidir.

Anahtar Kelimeler: COVID-19, korku, kaygı, yaşlı

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Introduction

The novel Coronavirus disease-2019 (COVID-19), which is caused by the severe acute respiratory syndrome-coronavirus-2, manifested itself with respiratory symptoms and spread rapidly within a short time, causing an epidemic throughout the world (1). The COVID-19 epidemic resulted in increased mortality and morbidity rates among those aged 65 years and over, as they are more affected by the disease, their immune systems are weaker, and they have higher frequencies of chronic diseases. According to the 2020 data of the Ministry of Health in our country, the death rate due to COVID-19 was 3.19% in the 50-54 age group, 13% in the 65-79 age group, and 26.94% in the 80 and above age group (2). To prevent the spread of COVID-19 during the epidemic, many measures such as isolation and quarantine were adopted in our country and around the world. However, the fact that people aged 65 and above, who are considered a high-risk group, account for the majority of deaths has led to a restriction being applied mainly for this group. This practice, which was carried out to protect against the virus, has led to some psychological problems among elderly people because they believe they are being discriminated against, feel worthless and lonely, and see that their activities are being limited (3). In addition, it is estimated that factors such as elderly people who had to work but failed to do so because of restrictions have experienced economic difficulties, and negative news in the media such as that "the elderly were left to die" and "the elderly died in nursing homes" increased the levels of anxiety and fear among the elderly (4). Difficulties in accessing health facilities and medicines due to restrictions during the pandemic period are among the many other factors that have led to mental health problems among the elderly (5).

Considering the results of the limited number of scientific studies and statistics that are available regarding the impact of COVID-19 on the lives of older people, it can be said that it triggers fear of death, loneliness, feelings of worthlessness, and stress and anxiety and negatively affects the quality of life of older people (6,7). Nurses have an important role to play in identifying the spiritual needs of older people and helping them improve their quality of life, which is thought to be compromised because of these issues. Nurses should plan for training and provide information on prevention methods to reduce isolation among this group and eliminate insecurity that can cause hopelessness. Nurses should also participate in remote counseling services such as e-nursing by developing their skills in using technological and digital tools. The results of this study will contribute to the planning

and quality of the care services mentioned above. This study was conducted to identify the factors that affected the quality of life of older people during the COVID-19 pandemic period.

This study is important because it has a scientific basis, provides a source for other scientific studies, and raises awareness of the psychosocial problems of older people. In addition, this study aims to help reduce the fears and anxieties of older people and improve their quality of life by guiding health and social care services and providing education for them.

Material and Method

This study was conducted as a descriptive cross-sectional study to determine the factors that affected the quality of life of older people during the COVID-19 pandemic. The study population was not specifically planned because it was not possible for the researchers to control the participants within the digital environment, and the data had to be collected in a specific period of time. Because of these constraints, the convenience sampling method, which is a non-probabilistic sampling method, was used (8). The sample of the research consisted of 154 individuals aged 65 and over who were literate, able to use technology tools, and agreed to participate in the exercise between March and May 2021. The data of the study were collected online using the Google form. Before starting to complete the survey, individuals who participated in the research ticked the option indicating that they were doing this voluntarily. Those who did not choose this option were denied access to some parts of the survey. The minimum sample size of the study was calculated using at least 10 participants per predictor variable for regression equations with six or more predictors. Therefore, the sample of our study meets the necessary conditions (12 predictor variables multiplied by 10= minimum 120 participants) (9).

Data Collection

The individuals who participated in the research were provided with Google forms explaining the purpose of the study and ensuring protection of their rights, such as confidentiality and privacy, and they were informed that they could withdraw from the research at any time. Individuals who participated in the study selected the option that indicated they were doing this voluntarily before filling out the questionnaire. Those who did not choose this option were denied access to parts of the survey.

The personal information form was prepared by the researchers by examining the literature and consists of 14 questions (3,6,7). This form contained nine questions about the participants' socio-demographic and health characteristics (age, gender, marital status, education, income, and chronic conditions). In addition, eight questions regarding their social life during the COVID-19 pandemic (number of people they are in frequent contact with, demonstration working status, living arrangement, living

Main Points

- In this study, which included 154 elderly individuals, it was determined that 47 of the elderly were not vaccinated against Coronavirus disease-2019 (COVID-19).
- In our study, it was determined that the elderly were afraid of contracting COVID-19 and had a moderate quality of life.
- Politicians, health organizations and nurses must work together during the epidemic to increase social support to ensure the well-being of the elderly.

place, contact status with COVID-19, COVID-19 vaccines), COVID-19 diagnoses, and during COVID-19 hospitalizations) were asked.

The study used the Coronavirus Anxiety Scale (CAS) developed by Lee (2020) and adapted into Turkish by Evren et al. (10) to assess the anxiety levels of older people during the COVID-19 epidemic. This five-point Likert-type scale is one-dimensional and includes five items: Participants' Answers, "Never =0 points", "Rarely, less than one or two days =1 point", "A few days =2 points", "More than seven days =3 points" and "Almost every day in the last two weeks =4 points". The participants were asked about "how often they have experienced the situations in the expressions in the last two weeks". The minimum score that can be obtained for each question is 0, and the maximum score is 4. The total score (between 0 and 20) is calculated by adding each item scored. The higher the score, the higher the anxiety associated with COVID-19. The Cronbach's alpha coefficient of the CAS was found to be 0.80 (10). In our study, Cronbach's alpha coefficient was found to be 0.92.

The study fear of COVID-19 scale (FCS) developed by Ahorsu et al. (2020) and its Turkish adaptation by Satici et al. (11) were used to determine the levels of fear among individuals during the COVID-19 epidemic. This five-point Likert scale is one-dimensional and consists of seven items: the lowest score that can be obtained on the scale is seven, and the highest score is 35. Since there is no item with an inverted value in this scale, as the score increases, people's fears of COVID-19 increase, and as the score decreases, their fears of COVID-19 decrease. The Cronbach's alpha coefficient of the FCS was reported to be 0.84 (11). In our study, a Cronbach's alpha coefficient of 0.93 was determined.

The study uses the quality-of-life scale in older people (CASP-19) developed by Hyde et al. (2014) and Turkoglu and Adibelli (12). CASP-19 consists of 13 items with a four-point Likert-type scale: 1= Never to 4= Always. These items include control (items 1, 2, 3), autonomy (items 4, 5, 6), pleasure (items 7, 8, 9, 10) and self-actualization (items 11, 12, 13). The items are rated with values between 0 and 3 points. An increase in the total score indicates an increase in quality of life. Items 1, 2, and 8 are reverse coded. The Cronbach's alpha coefficient of CASP-19 was found to be 0.91 (12). In our study, a Cronbach's alpha coefficient of 0.88 was determined.

Ethical Aspects

Before the study, approval was obtained from the Scientific Ethics Committee of Mersin University (numbered 2021-3 and dated May 3, 2021).

Statistical Analysis

Data were analyzed using SPSS 22.0 (SPSS Inc.). The general characteristics of the participants were evaluated and presented as frequencies and percentages. The Shapiro-Wilk test was used to test for normality ($p>0.05$). Multiple linear regression analysis (the Enter method) was

used to estimate the quality of life in terms of age, gender, marital status, education level, income status, employment status, place of residence, presence of chronic disease, vaccination status, diagnosis status, fear level, anxiety, and other variables. The linearity and normality of the data were checked before performing multiple linear regression analysis. A value of $p<0.05$ was set as the significance level of the tests.

Results

The socio-demographic characteristics of the participants and the COVID-19 infection status are shown in Table 1. The mean age of the older people who participated in the study was 71.44 ± 6.28 (min=65, max=90); 60.4% were women, 79.2% were married, 42.2% were able to read and write, 16.9% worked, 48.7% lived in the province, 59.1% lived with their families, 30.5% had not been vaccinated against COVID-19, and 11.7% had not been vaccinated against COVID-19 (see Table 1).

Table 2 shows the distribution of the CAS, FCS, and CASP-19 scores of the elderly. According to these data, the mean CAS score of the elderly is 4.39 ± 4.58 (min=0, max=20), the mean FCS score is 21.91 ± 7.22 (min=7, max=34), and the mean ELQS score is 21.25 ± 7.53 (min=3, max=39). At the end of the study, the internal consistency coefficients of Cronbach's alpha were calculated for CAS, FCS, and CASP-19. These values were found to be 0.92 for CAS, 0.93 for FCS, and 0.88 for CASP-19. The literature suggests that the internal consistency coefficient of Cronbach's alpha should be above 0.80 for a scale to be a reliable measurement tool (13). In addition, the conformity of the CASP-19 score to the normality distribution was assessed using the Shapiro-Wilk test, and the result was determined to be $p>0.05$ (Table 2) (14).

The predictive effects of the socio-demographic characteristics of the elderly, the characteristics related to COVID-19, and their COVID-19 anxiety and fear levels with regard to their quality of life were investigated using multiple linear regression analysis. The model created from the results of the analysis predicted a 38.2% statistically significant variance in QOL ($F=5.285$, $p<0.001$). In addition, age ($\beta=-0.239$; $p=0.001$), education level (undergraduate and postgraduate) ($\beta=0.175$; $p=0.049$), anxiety level ($\beta=-0.204$; $p<0.028$), and fear level ($\beta=-0.228$; $p<0.049$) were determined as statistical predictors of quality of life. A one-unit increase in age was associated with a 0.335-point increase in CASP-19 scores, a one-unit increase in CAS scores was associated with a 0.237-point increase, and a one-unit increase in FCS scores was associated with a 0.237-point decrease. Obtaining a university degree was also associated with an increase in CASP-19 scores (see Table 3).

Discussion

The world imposed curfews and social isolation to contain the spread of the COVID-19 pandemic. The aim was to use strict measures to protect people, especially elderly

Table 1.
The Socio-demographical Characteristics of the Participants and Their Conditions in the COVID-19 Process (n=154)

Socio-demographic characteristics	Minimum-maximum score	$\bar{x} \pm SD$
Age	65-90	71.44±6.28
	n	%
Gender		
Female	93	60.4
Male	61	39.6
Marital status		
Single	32	20.8
Married	122	79.2
Level of education		
Literate	65	42.2
Primary school	42	27.3
High school	21	13.6
Undergraduate and postgraduate	26	16.9
Work status		
Worker	26	16.9
Not working	118	83.1
Income status		
Income less than expenses	46	29.9
Income equals expense	78	50.6
Income more than expenses	30	19.5
Living place		
Village-town	33	21.4
County	46	29.9
Province	75	48.7
Living arrangement		
Alone	28	18.2
Family	91	59.1
With friend	35	22.7
One or more chronic diseases		
Yes	87	56.5
No	67	43.5
Vaccinated for COVID-19		
Yes	107	69.5
No	47	30.5
Diagnosed with COVID-19		
Yes	18	11.7
No	136	88.3

SD=Standard deviation, COVID-19=coronavirus disease-2019

Table 2.
Distribution of the Participants' CAS, FCS and CASP-19 Scores (n=154)

Scales	n	Minimum-maximum score	$\bar{x} \pm SD$
CAS total score	154	0 -20	4.39±4.58
FCS total score	154	7-34	21.91±7.22
CASP-19 total score	154	3-39	21.25±7.53

CAS=Coronavirus anxiety scale, FCS=fear of coronavirus COVID-19 scale, CASP-19=quality-of-life scale for the elderly, SD=standard deviation

individuals over 65 years of age and those at high risk of infection, from contracting COVID-19. However, although the aim was to protect the elderly, the risks incurred by social isolation were overlooked along with those resulting from cardiovascular, autoimmune, neurocognitive, and mental health problems (15). Therefore, this study aims to focus on determining the factors that influenced the quality of life of the elderly during the COVID-19 pandemic period.

The term health-related quality of life is closely linked to the psychosocial status of patients due to their physical health problems (16). In this study, the average score was 21.25±7.53, indicating that the quality of life among the elderly was moderate. The research findings in our study were similar to those of a study conducted by Bayrak and Çadirci (17), who found that the scores for the quality-of-life scale in older people moderate. However, the pandemic has affected many areas of our lives and reduced people's quality of life. In addition, it has been reported in the literature that the COVID-19 epidemic itself is associated with increased anxiety and fear rates and has had adverse effects on the general quality of life (18-20). Additionally, it is stated in the literature that fear of COVID-19 may increase the damage caused by COVID-19 disease (21,22). This study also showed that the anxiety levels of the elderly in relation to COVID-19 were low (4.39±4.58) and that their fear levels were moderate (21.91±7.22). Although the results of our research seem promising, failure to investigate the factors that affect quality of life in detail may indicate a further decrease in quality of life over the long term.

In this study, the socio-demographic variables, features of COVID-19, CAS and FCS predicted 38.2% of the variance in the CASP-19 score. Based on these results, a significant part of the quality-of-life scores among the elderly, which are affected by many factors, can be explained by 12 variables. Examination of the variables that were found to provide a statistically significant predictor of the score for the Quality-of-Life Scale in Older People in the regression analysis indicated that the age variable took the first place in the order of importance. This suggests that the quality of life of elderly people decreases with increasing age. In contrast to our findings, Qiu et al. (7) and Moghanibashi-Mansourieh (23) reported that fear of COVID-19 is higher in young people than in the elderly, and that such fear decreases with age. Our research results can be explained by the fact that

Table 3.
The Socio-demographic Characteristics of the Participants in the COVID-19 Process and the Effect of CAS and FCS on CASP-19 (n=154)

CASP-19	Unstandardized coefficients		Standardized coefficients	t	p	95.0% CI	
	B	SE	β			Lower bound	Upper bound
Independent variables							
(Constant)	43.873	6.802		6.450	<0.001*	30.423	57.324
Age	-0.287	0.88	-0.239	-3.251	0.001*	-0.461	-0.112
Gender (R: Man)							
Female	0.639	1.175	0.042	0.544	0.587	-1.684	2.962
Marital status (R: Single)							
Married	1.063	1.433	0.057	0.741	0.460	-1.772	3.897
Education level (R: Literate)							
Primary school	1.709	1.422	0.101	1.201	0.232	-1.104	4.522
High school	2.882	1.843	0.132	1.564	0.120	-0.762	6.526
Undergraduate and postgraduate	3.506	1.761	0.175	1.991	0.049*	0.023	6.989
Working status (R: Not working)							
Worker	2.995	1.548	0.149	1.935	0.055	-0.065	6.055
Income status (R: Income less than expenses)							
Income equals expense	-0.359	1.275	-0.024	-0.281	0.779	-2.880	2.162
Income more than expenses	0.247	1.670	0.013	0.148	0.883	-3.055	3.548
Living place (R: Village-town)							
County	0.415	1.595	0.025	0.260	0.795	-2.738	3.568
Province	0.656	1.492	0.044	0.440	0.661	-2.295	3.607
One or more chronic diseases (R: No)							
Yes	-0.116	1.097	-0.008	-0.106	0.916	-2.286	2.054
Vaccinated for COVID-19 (R: No)							
Yes	1.950	1.407	0.120	1.385	0.168	-0.834	4.733
Diagnosed with COVID-19 (R: Yes)							
No	-2.040	1.835	-0.087	-1.112	0.268	-5.668	1.587
FCS	-0.237	0.107	-0.228	-2.224	0.028*	-0.448	-0.026
CAS	-0.335	0.169	-0.204	-1.985	0.049*	-0.669	-0.001

CAS=Coronavirus anxiety scale, FCS=fear of coronavirus COVID-19 scale, COVID-19=coronavirus disease-2019, CASP-19=quality-of-life scale for the elderly, Durbin-Watson=2.134; F=5.285, p<0.001; R=0.618; R²=0.382; Adjusted R²=31.0 %, CI=confidence interval, SE=standard error, β =standardized regression coefficient, R=reference *significance level was accepted as p<0.05

the body's defences decline as people age, the virus that causes COVID-19 is more deadly for people who have chronic diseases, particularly those who are older, and this increases their fear and impacts the quality of their lives.

With regard to our study, the second variable in order of importance was the score for the FCS, and the increase in this score was associated with a negative impact on quality of life. In support of our research, a study by Serafini et al. (24) highlighted the fact that the quality of life among people who experience anxiety, anger and fear is impaired and that it deteriorated during the quarantine period. No studies to the contrary were found in the literature. Based on our

research findings, it can be said that people's unfamiliarity with COVID-19 infection and the confidence issues that have arisen over the newly released COVID-19 vaccines have led to fear and anxiety, and that these negative emotions affect quality of life.

Anxiety has negative impacts on the quality of life among older adults, and it is necessary to reduce anxiety to be able to promote healthy and active aging (25). According to the regression analysis in our study, the third variable that was found to be statistically significant in order of importance with regard to predicting the score for the Quality-of-Life Scale in Older People was the CAS. As the anxiety levels

of the elderly people increased, the quality of their lives decreased. There are a few studies in the literature that support our result. Siew et al. (26) found that while there was no association between older people's pre-pandemic anxiety levels and their qualities of life, the quality of their lives decreased with increasing anxiety during the pandemic. This result clearly shows that the quality of life among older people can easily be affected by psychological symptoms in an event such as COVID-19 or a future epidemic, and that precautionary measures should be taken.

When examining the statistically significant predictors of the value of the in this study, the average score for the Quality-of-Life Scale in Older People the regression analysis that was conducted revealed that the last variable in order of significance was education level. As the education levels of the elderly increased, the quality of their lives increased. Morgan et al. (27) and Zhang et al. (28) found a significant association between educational achievement and quality of life. Our research findings support the data in the literature. It is believed that higher levels of education make it easier for individuals to access the correct information about COVID-19 and also to protect themselves by acting more consciously in accordance with the information they acquire.

Study Limitations

It is known that the COVID-19 pandemic negatively affects the lives of the elderly. In this period, it can be said that the pandemic triggers the fear of death, loneliness, stress, and anxiety in the elderly. It is thought that determining this situation with our research results will constitute an important source for the literature. In addition, it is thought that the results of scientific research will increase the awareness of governments about another possible problem and will further highlight the needs of the elderly.

The limitation of this study is that it was applied to a limited group. Some of the limitations of this research are that most elderly people in our country cannot take a very active role in the digital platform and the data is based on the notifications of the participants.

Conclusion

The elderly are at a greater risk of contracting COVID-19 because of chronic illnesses and care needs. Although recommendations for social and home isolation are important measures for limiting the spread of the virus, they can trigger strong feelings of fear, loneliness, and abandonment in the elderly population. These feelings also have a negative impact on the quality of their lives.

In our study, it was determined that the elderly feared contracting COVID-19, suffered anxiety, and had moderate quality of life. Even though the COVID-19 pandemic is essentially over, the elderly remain vulnerable to future pandemics. Therefore, as nurses, we should not forget that

multiple factors affect the quality of life among the elderly, and we should participate in planning health policies to provide these individuals with physical, emotional, psychological, and social supports.

Ethics Committee Approval: Before the study, approval was obtained from the Scientific Ethics Committee of Mersin University (numbered 2021-3 and dated May 3, 2021).

Informed Consent: Informed consent was obtained.

Author Contributions: Conception – Y.S., A.A.C., G.C., D.V.Y.; Design – Y.S., G.C., D.V.Y.; Supervision – D.V.Y.; Materials – Y.S., D.V.Y.; Data Collection and/or Processing – Y.S., G.C.; Analysis and/or Interpretation – Y.S., G.C., D.V.Y.; Literature Review – Y.S., A.A.C., G.C., D.V.Y.; Writing – Y.S., A.A.C., G.C., D.V.Y.; Critical Review – Y.S., A.A.C., G.C., D.V.Y.

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