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EXAMINING FACTORS INFLUENCING COPING WITH THE OUTBREAK DURING THE COVID-19 EPIDEMIC IN ELDERLY INDIVIDUALS

COVID-19 Salgını Sırasında Yaşlı Bireylerde Salgınla Başa Çıkmayı Etkileyen Faktörlerin İncelenmesi

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ABSTRACT

In this study, we aimed to examine the factors affecting coping with the epidemic during the COVID-19 epidemic in elderly individuals. Participants were asked to complete the Coping with the Outbreak Scale (CwOS), the Spirituality Scale (SS), and the Multidimensional Scale of Perceived Social Support (MSPSS). A total of 76 people (61.8% females) with a mean age of 73.1±8.2 were included in the study. Multivariate linear regression analysis using the backward method was used to examine the factors affecting coping with the epidemic. Multidimensional perceived social support, spirituality, and perceived economic status were significant predictors, and an increase of 1 unit in these variables resulted in an increase of 0.305, 0.410, and 4.426 units in the CwOS variable, respectively. It was observed that the variable dwelling place was also a significant predictor, and an increase of 1 unit in this variable caused a decrease of -4.362 units in the CwOS variable. The independent variables in the model explained 65.1% of the change in the CwOS score. Social support, spirituality, perceived income status and dwelling place are the factors that affect coping with the COVID-19 outbreak in elderly individuals. These factors are recommended to be considered by healthcare professionals dealing with elderly individuals.

Keywords: Coping, COVID-19, Spirituality, Social support.

ÖZ

Bu çalışmada; yaşlı bireylerde COVID-19 salgını sürecinde salgınla başa çıkmayı etkileyen faktörlerin incelenmesi amaçlandı. Katılımcılardan Salgınla Başa Çıkma Ölçeği (CwOS), Maneviyat Ölçeği (SS) ve Çok Boyutlu Algılanan Sosyal Destek Ölçeği'ni (MSPSS) doldurmaları istendi. Çalışmaya yaş ortalaması 73.1±8.2 olan, 76 kişi (%61.8 kadın) dahil edildi. Salgınla başa çıkmayı etkileyen faktörlerin incelenmesinde Backward yöntemini kullanan çok değişkenli doğrusal regresyon analizi kullanıldı. Çok boyutlu algılanan sosyal destek, maneviyat ve algılanan ekonomik durum anlamlı yordayıcılar olarak bulunmuş ve bu değişkenlerdeki 1 birimlik artış CwOS değişkeninde sırasıyla 0.305, 0.410 ve 4.426 birimlik artışa neden olmuştur. Yaşadığınız yer değişkeninin de anlamlı bir yordayıcı olduğu ve bu değişkendeki 1 birimlik artışın CwOS değişkeninde -4.362 birimlik azalmaya neden olduğu görülmüştür. Modeldeki bağımsız değişkenler, CwOS Puanındaki değişimin %65.1'ini açıklamaktadır. Sosyal destek, maneviyat, algılanan gelir durumu ve yaşanılan yer yaşlılarda COVID-19 salgını ile baş etmeyi etkileyen faktörlerdir. Bu faktörlerin yaşlı bireylerle ilgilenen sağlık profesyonelleri tarafından dikkate alınması önerilmektedir.

Anahtar kelimeler: Başa çıkma, COVID-19, Maneviyat, Sosyal destek.

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INTRODUCTION

COVID-19 is caused by the SARS-CoV-2 and was first identified on January, 2020, following mysterious pneumonia cases in China (Huang et al., 2020). The World Health Organization (WHO) identified the outbreak as a worldwide epidemic on March 11, 2020 (WHO, 2020).

The COVID-19 pandemic placed a disproportionate burden on some population groups, particularly on the elderly (Shahid et al., 2020). For instance, although people older than 65 years constitute only 17% of the general population of the United States, the same group makes up half of all intensive care unit hospitalizations, and 80% of all deaths occur due to COVID-19 (Kim et al., 2021).

Apart from being biologically vulnerable to COVID-19, the older population also suffered from untoward mental effects of COVID-19. Starting in the early days of the pandemic, this population was subjected to more stringent social distancing and quarantine measures than other age intervals of the population. A narrative review of the physical and mental effects of COVID-19 in older people revealed that anxiety, depression, poor sleep quality, and physical inactivity were increased in these people during the pandemic (Sepúlveda-Loyola et al., 2020). Social isolation and loneliness in older people are effective in increased rates of depression, cognitive impairment, and mortality (Courtin & Knapp, 2017). A meta-analysis involving 30 studies and 28000 people revealed that loneliness and social isolation were quite prevalent and were found to be present in 28.6% and 31.2% of the study subjects, respectively (Su et al., 2022). Elderly individuals used a number of coping strategies to improve their psychological and related physical well-being during isolation periods due to COVID-19 stay-home orders or contact isolation. A qualitative study investigating the coping strategies of older adults found that coping strategies included, but were not limited to, exercising and going outdoors, modification in daily routines, compliance with public health guidelines, adjusting attitudes, and maintaining social contact (Finlay et al., 2021). Moreover, some studies (Davis et al., 2021; Durmus & Ozturk, 2022; Rababa, Hayajneh & Bani-Iss, 2021) have investigated the role of spiritual well-being and religious coping. A study on elderly Arabic persons revealed significant levels of anxiety over dying together with poor levels of spirituality and religious coping (Rababa, Hayajneh & Bani-Iss, 2021). A recent Turkish research have reported low levels of despondency and moderate levels of spiritual well-being (Durmus & Ozturk, 2022). Another prospective longitudinal research indicated consistent spiritual results throughout time, and psychological resilience was shown by half of all participants (Davis et al., 2021). Despite a

significant amount of data regarding the psychological impact of COVID-19 on older people, data regarding coping with COVID-19 and the social support and spirituality related to it have not been well studied. Thus, we planned to conduct a cross-sectional survey study in which the factors affecting coping with the epidemic were evaluated during the period of social restrictions associated with COVID-19.

MATERIAL AND METHOD

This study was conducted with 76 elderly people. It was a cross-sectional survey study. Individuals over the age of 65 living in Ankara were included in the study. The presence of neurological or psychiatric disease was determined as the exclusion criterion. Data were collected for elderly individuals during the abovementioned period when restrictions on using public transportation and going outdoors between certain hours were applied. This study was performed in line with the principles of the Declaration of Helsinki. Approval was granted by the Gülhane Scientific Research Ethics Committee of the University of Health Sciences (17.06.2021-2021/283).

Data Collection

To collect sociodemographic data, age, sex, education status, perceived income status, dwelling place, and place of residency were recorded.

Study Surveys

The Coping with the Outbreak Scale (CwOS)

This scale includes 20 items in total (Hatun, Dicle & Demirci, 2020) and a structurally 6-point Likert type (0=I have never done it, 5=I have done it very often). The Cronbach’s alpha internal consistency coefficient of the CwOS was calculated as .84. A high score on the scale indicates that the person's ability to cope with the epidemic is at a high level (Hatun, Dicle, & Demirci, 2020). The Cronbach’s alpha value of the CwOS was 0.911 in our study.

The Spirituality Scale (SS)

This is a scale developed for youth and adults to evaluate various dimensions of human spirituality, such as the search for the meaning of life, the connection with the divine, the ultimate truth or the highest value, grasping the mystery of creation, the feeling of connecting to God, the customization of belief, and the sense of oneness with the universe. The Spirituality Scale is a 5-point Likert-type scale (1= Not suitable for me at all, 5= Completely suitable) consisting of 27 items. Negative items (items 8, 13, and 26) in the scale are reverse coded before

being evaluated. A high score on the scale indicates that the person has a high level of spirituality. The Cronbach's alpha was 0.90, Guttman's alpha was 0.91, Spearman's Brown's rho was 0.89, and the test-retest reliability coefficient was r =.95. The total score of the scale varies between 27 and 135 (Şirin et al., 2018). The Cronbach's alpha value of the SS was 0.922 in our study.

Multidimensional Scale of Perceived Social Support (MSPSS)

It is a scale that assesses the appropriateness of interpersonal assistance, including help from friends, family, and unique human needs, on a per-subjective basis. It was developed by Procidona and Heller in 1983 (Procidano & Heller 1983). The reliability and validity study in our country was first conducted by Dağ in 1991 (Dağ, 1991). The scale was revised and validated in Turkish again by Eker and colleagues. It is a scale consisting of 12 items. It includes 3 groups related to the source of the support, each of which consists of 4 items. Items were evaluated using a 7-point scale. Cronbach's alpha values were found to be between 0.80 and 0.95. A high score (the highest possible score is 84) indicates high perceived social support (Eker, Arkar & Yaldız, 2001). The Cronbach's alpha value of the MSPSS was 0.935 in our study.

Statistical Analysis

In this study, the data analysis was performed using SPPS 25 (IBM Corp. Released 2017. IBM SPSS Statistics for Windows, Version 25.0. Armonk, NY: IBM Corp.) program. Categorical variables were reported as numbers and percentages. The Shapiro Wilks test histogram and Q-Q plot were used to analyze the normality of the continuous variables. Continuous variables are presented as the mean ± standard deviation for normally distributed variables and median (min-max) for nonnormally distributed variables. The Pearson correlation test and the point-bizerial correlation were used to determine the correlations. Multiple linear regression analysis with the backward method was applied to obtain the estimation model. From the linear regression assumptions, conformity to a normal distribution was examined by the Kolmogorov–Smirnov test and a linear relationship scatter plot (scatter plot). The adequacy of the model: Autocorrelation between variance inflation factor (VIF) and errors by Durbin-Watson test, effective observations with Cook's distance and Covariance Ratio, distant observations with Mahalanobis distance, homoscedasticity of variance Breusch–Pagan test With this, the normal distribution of errors, extremely outlier observations were examined by means of standardized residual plots (Alpar, 2011). The significance level for all analysis results was accepted as $p<0.05$.

A sample calculation was made for Pearson correlation analysis with the G*Power Version 3.1.9.4 package program. When the Type 1 error was 0.05, the power was 0.80, and the effect size index Pearson correlation coefficient was taken as medium (0.35) as suggested by Cohen, the sample number was 61 in our power analysis.

RESULTS

Overall, 76 subjects (61.8% females) with a mean age of 73.1±8.2 were included in the study. The general characteristics of the subjects are given in Table 1.

Table 1. Demographic Characteristics and Study Survey Scores of All Participants

		Patients (n=76)
Age (years)		73.1 ± 8.2
Sex	Female	47 (61.8%)
	Male	29 (38.2%)
Education status	Illiterate	12 (15.8%)
	Primary or secondary school	43 (56.6%)
	High school- two-year degree	18 (23.7%)
	University	3 (3.9%)
Dwelling place	Own house	49 (64.5%)
	A relative's house	10 (13.2%)
	Nursing home	17 (22.4%)
Perceived income status	Very low	2 (2.6%)
	Low	12 (15.8%)
	Middle	51 (67.1%)
	High	11 (14.5%)
Place of residency	Village	14 (18.4%)
	County	21 (27.6%)
	City	17 (22.4%)
	Metropolis	24 (31.6%)

The participants' mean CwOS score was 42.7 ± 15.1; the mean SS scores were 111.5 (58.0- 135.0); The MSPSS mean score was determined to be 61.0 (16.0-84.0).

Table 2. Relationship Between Variables

		Age	**SS**	**MSPSS**		**Perceived economic status**	**Dwelling Place**	**Place of residency**
CwOS	**Spearman's rho**	-0.291	0.421	0.688	**Pearson r**	0.215	-0.379	-0.305
	P	0.011	<0.001	<0.001	**p**	0.062	0.001	0.007

CwOS: Coping with the Outbreak Scale, SS: Spiritual Scale, MSPSS: Multidimensional Scale of Perceived Social Support.

The relationship between CwOS and age, SS, and MSPSS variables was analyzed by Spearman correlation analysis, and the results are shown in Table 2. There was a weak negative correlation between age and CwOS (r=-0.291). There was a moderate positive correlation between CwOS and SS and MSPSS (r=0.421 and r=0.688, respectively). The relationship

between CwOS and the variables of perceived economic status, dwelling place, and place of residency was evaluated with the point-bizerial correlation coefficient, and the results are shown in Table 2. There was a moderate negative correlation between CwOS and dwelling place and place of residency (r=-0.379 and r=-0.305, respectively). There was a weak positive correlation between perceived economic status and CwOS (r=0.215).

Table 3. Multivariate Linear Regression Analysis Results

	β	SE(β)	Beta	t	p	VIF	R^2 (Adjusted R^2)	F
Constant	-19.168	8.375		-2.289	.025			
MSPSS	.305	.073	.337	4.168	.000	1.333		
SS	.410	.074	.507	5.533	.000	1.709	0.651 (0.633)	F(4,67)=34.122 p<0.001
Perceived economic status*	4.426	1.634	.206	2.710	.009	1.176		
Dwelling Place**	-4.362	1.547	-.252	-2.819	.006	1.628		

* Reference Category Very Low ** Reference Category Living in Own House

In Table 3, it is understood by the residual graphs that the residuals are normally distributed for the model obtained as a result of the multivariate linear regression analysis using the backward elimination method. Heteroscedasticity was evaluated with the Breusch–Pagan (p=0.446) test, a correlation between residuals was evaluated with the Durbin-Watson test (D-W=1.642, p=0.072), and it was found that there was no autocorrelation (Fox and Weisberg, 2019).

Four extremely distant and influential cases (case numbers 48, 62, 66 and 71) were excluded from the dataset. The model obtained as a result of multiple linear regression analysis with the remaining 72 observations was found to be statistically significant (F(4,67)=34.122, p<0.001). No multicollinearity was found (VIF<5).

The contribution of the variables MSPSS, SS, perceived economic status and dwelling place to the model was found to be statistically significant (p<0.001, p<0.001, p=0.009 and p=0.006, respectively). The variables of multidimensional perceived social support, spirituality and perceived economic status were significant predictors, and an increase of 1 unit in these variables caused an increase of 0.305, 0.410 and 4.426 units in the CwOS variable, respectively. It was observed that the variable dwelling place was also a significant predictor, and an increase of 1 unit in this variable caused a decrease of 4.362 units in the CwOS variable. When the CwOS score was evaluated according to the dwelling place, it was observed that the mean CwOS score of those living in their own home (46.16±13.49) and their children's home (44.40±14.48) was higher than that of those living in a nursing home (31.64±15.21). The CwOS

score increased as perceived economic status increased (24.50±6.36, 37.66±15.92, 44.13±7.95 and 44.73±15.06, respectively).

When an evaluation was made independent of the measurement types according to the standardized regression coefficients (Beta), it was seen that the most effective variable in the model was SS (0.507), and the second most effective variable was MSPSS (0.337). The independent variables in the model explain 65.1% of the change in the CwOS Score (Alpar, 2011).

Model;

CwOS_ Score = -19.168 + 0.305* MSPSS + 0.410* SS + 4.426* perceived economic status – 4.362* dwelling place

DISCUSSION

The results of this study examine the factors that may affect elderly individuals' ability to cope with the COVID-19 outbreak. Our study shows that spirituality, multidimensional social support, perceived income level and place of residence have a significant impact on coping with the epidemic. Individuals with a high level of spirituality, social support and income can avoid automatic thoughts and habits and develop an effective way of coping with the epidemic. At the same time, the fact that elderly individuals live in their own homes or with their children can contribute positively to coping with the epidemic.

Although some studies have reported increased vulnerability of older adults to the negative psychological effects of the COVID-19 pandemic, such as increased anxiety and health worries (Bergman, Cohen-Fridel, Shrira, Bodner & Palgi, 2020), several other studies (Czeisler et al., 2020; González-Sanguino et al., 2020; Van den Besselaar et al., 2021) have shown the contrary. For instance, in a longitudinal study started before the COVID-19 pandemic, Van den Besselaar found that the first COVID-19 wave had a slight impact on older adults with respect to depression and anxiety levels (Van den Besselaar et al., 2021). A survey study at the outset of the pandemic conducted by the Centers for Disease Control found that older adults reported significantly lower rates of depressive and anxiety disorders as well as stress-related disorders than younger individuals (Czeisler et al., 2020). Another large study from Spain confirmed the findings of the second study, reporting that 18.7% of participants had depressive symptoms, 21.6% had anxiety and 15.8% had PTSD symptoms, but age was negatively associated with these symptoms (González-Sanguino et al., 2020). Along with these variable results, studies have shown that elderly individuals may be adversely affected by the

changing living conditions of the pandemic and that they should use effective methods of coping with these effects (Rababa et al., 2021; Finlay et al., 2021; Fuller & Huseth-Zosel, 2021).

Spirituality is described as a state that relates the individual's mind and body to society, intellect, and health and that supports the individual's views and life objectives (Chou, Tsai, Hsu & Wu, 2016). Spiritual well-being is also a more positive state and emotion, behavior and thought, relationships with one person and others, and a sense of beauty, love, respect, and positivity. It brings together the physical, emotional, social, and psychosocial aspects of health. (Velasco-Gonzalez & Rioux, 2014). In addition to the negative changes that occur with the aging process, spirituality has a significant impact on coping with psychosocial problems such as stress, fear and anxiety due to the COVID-19 epidemic (Rababa et al., 2021; Koenig, 2020). In our research, it was seen that high spirituality is an important and positive factor in coping with the epidemic. Spirituality has an important effect on coping with the changes that occur with aging and stress (Durmuş & Durar, 2022). Individuals can use spirituality as an effective coping strategy by communicating more when they encounter difficulties and expecting more help and guidance against illness or difficulties (Klavuz & Klavuz, 2016). Among the variables included in the regression model in our research, spirituality makes the largest contribution to the model.

In our cohort of elderly individuals, coping was positively and strongly correlated with perceived social support and spirituality scores. The more an individual was spiritual and felt receiving social support, the greater they were coping with the difficulties of the pandemic. Natural catastrophes and disasters might have dual effects on religious/spiritual coping Disasters may cause a religious/spiritual struggle, straining their beliefs (Zhang et al., 2021).In contrast, some people embrace religious/spiritual coping when they try to recover from a traumatic event (Pargament, Feuille & Burdzy, 2011). Rababa et al. found that spiritual well-being was a significant predictor of death anxiety in addition to religious coping in older adults during the COVID-19 pandemic (Rababa, Hayajneh & Bani-Iss, 2021). In a recently published study of young adults, Arslan and Yıldırım found that meaning-based coping and spiritual well-being were instrumental in mediating decreases in the subjective well-being of participants during the COVID-19 pandemic (Arslan & Yıldırım, 2021).

In another study, which was similar to our study in terms of sample size and age range, almost 90% of the study participants rated their coping with the pandemic in a positive manner. Two coping strategies come to the fore: keeping busy and demanding social support (Fuller & Huseth-Zosel, 2021). Social support can be measured in various ways; however, the most commonly used measure is perceived social support (Ibarra-Rovillard & Kuiper, 2011). It has

been shown to be a better indicator of mental health than other measures of social support (Dour et al., 2014). In our study, the MSPSS score showed a significant positive correlation with coping. Similar to our study, Onal and colleagues (Onal et al., 2022) demonstrated that high perceived social support was positively and independently associated with life satisfaction among older adults during the COVID-19 pandemic.

Income status and place of residence were other factors independently related to coping with the pandemic. It was seen that a high level of perceived income contributed positively to coping with the epidemic. Additionally, it was determined that elderly people living in their own homes or the homes of their relatives also had a positive effect on coping with the epidemic. Studies in the literature show the effects of low-income older adults on their experiences of interpersonal context (social connections) and individual contexts (emotions, beliefs, and behaviors) during the COVID-19 pandemic (Winship, Sargent, Waters, Zanjani & Parsons, 2021; Winship et al., 2022). These findings suggest that high income and living space may be important factors for positive coping behaviors in a crisis situation. Living in their own or a relative's home understandably enables older adults to be supported socially. This in turn increases the coping capability of the individuals.

The fact that we used the convenience sampling method by including participants who applied to a single center in our research can be seen as a limitation of our study.

CONCLUSION

Given the burden of COVID-19 on aging populations, understanding effective ways to live with the pandemic is crucial. Coping includes cognitive and behavioral strategies that individuals use to cope with or control stressful situations. Coping can also be influenced by many biological and psychosocial factors, such as spirituality, social support, and sociodemographics. In conclusion, it is recommended to plan interventions for older adults on methods that will enable them to cope with the epidemic, improve their spirituality, use social support networks effectively and increase their social interaction. Additionally, it is important for health care practitioners to consider that sociodemographic factors such as economic level are important for elderly individuals to cope with the epidemic while planning these interventions. It has been found that determining how individuals cope is especially related to spirituality. The results of the current study can be a guide for interventions to be made on coping strategies in elderly individuals; however, the results of this study alone are not sufficient to generalize. In this context, further research could be conducted to develop coping strategies as a potential avenue for intervention.

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