

DEPRESSION IN OLDER PEOPLE DURING THE COVID-19 CURFEW

Tahsin Barış DEGER¹, Huri Seval GONDEREN ÇAKMAK², Emin BOZKURT³, Bedri EMINSOY⁴

¹ Department of Gerontology, Faculty of Health Science, Çankırı Karatekin University, Çankırı, Turkey

² Department of Geriatric Care Services, Eldivan Vocational School of Health Services, Çankırı Karatekin University, Çankırı, Turkey

³ Department of Veterinary, Eldivan Vocational School of Health Services, Çankırı Karatekin University, Çankırı, Turkey

⁴ Department of Child Care and Youth Services, Eldivan Vocational School of Health Services, Çankırı Karatekin University, Çankırı, Turkey.

Address for Correspondence: Tahsin Baris Deger, **E-mail:** tahsinbarisd@karatekin.edu.tr / drbarisdeger@gmail.com

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ABSTRACT

Purpose: Curfew was declared for the people 65 years and older to protect from the COVID-19 pandemic by the government in Turkey on 21 March 2020. The aim of this study is to determine the depression levels, factors affecting depression, concerns about COVID-19 infection, thoughts about curfew, lifestyles and ways of meeting their needs of the older adults during the curfew.

Methods: In the first method, the data of the study were collected by the researchers by contacting the relatives of our university health department students by phone or video interview, and in the second, via Google Forms by the link of the study shared on social networks and online platform and a total of 1311 older people were included. Older adult information form and Geriatric Depression Scale Short Form (GDS-15) were used. Mann Whitney-U Test, Kruskal Wallis Test and Multivariate Logistic Regression analysis were conducted.

Results: Prevalence of depression was measured as 44.2% in the participants. Being aged 85 and over, illiteracy, living alone, having chronic disease, previous psychiatric diagnosis, anxiety about infection with COVID-19 and disapprove of curfew decision significantly increased the depression levels in older adults.

Conclusion: The curfew during the COVID-19 pandemic increased the depression level in older adults compared to before the curfew.

Keyword: COVID-19, curfew, depression, older adults, pandemic

INTRODUCTION

The COVID-19 outbreak, which started in December 2019 in the Wuhan region of China, spread rapidly all over the country and then throughout the world (1). COVID-19 is transmitted human to human by

respiratory droplets and contact. (2). Therefore, isolation at home seems to be an effective method. Countries implemented national policies to minimize pandemic harm to their citizens. (3). One of these policies in our country was for the older adults,

because older people constituted one of the most important risk groups for this disease (4). Curfew was declared in Turkey on March 21 for individuals aged 65 years and older (5).

The curfew imposed on the older adults led to loneliness and social isolation. Even in studies before the COVID-19 pandemic started, social isolation and loneliness were reported to increase depression and anxiety levels in the older adults (6). Geriatric depression is a major public health problem and risk factor that can make diseases worse, especially among people with chronic diseases like cardiovascular diseases and diabetes mellitus (7). Depression in the older adult affects people with cognitive impairment, chronic disease more and increases mortality, in addition to causing suffering, family unrest and disability (8).

The curfew was declared in Turkey continued for about 70 days. The 50 days were full restrictions, the older adults were never able to go out, in the last 20 days they were allowed to go out for 3-4 hours, once a week. The curfew for the older adults was ended on 1 of June. The number of cases decreased, the society took a good breath in the summer months when the restrictions were lifted, but with the autumn, the number of cases started to increase in our country as in the whole world (9). The arrival of the second wave of the pandemic forced the government to restricts again. The restriction for the elderly was again imposed, but it was not a full restriction as in first wave. They were allowed to go out at certain times every day (10).

In this study, we aimed to measure the depression levels of older adult individuals who could not leave home during the COVID-19 curfew (when there are full restrictions in the first wave of the pandemic) in Turkey. We tried to determine the factors affecting depression in the older people during the COVID-19 curfew and the lifestyle of the elderly and what their coping strategies were in this difficult period when they could not leave the house. We tried to determine what they think about pandemic and constraints and who they get support from and how all these factors affect depression levels.

METHODS

Subjects

This is a descriptive study which included a total of 1311 community-dwelling older adult individuals throughout Turkey. Our sample consists of older adult individuals who could not leave their home due to the

curfew. Participants aged 65 years and over, have capable of easily understanding and answering questions posed by researchers, and who voluntarily accepted to participate in the study were included. According to the WHO, older adults are classified as young elderly, middle elderly and old elderly, respectively aged 65 – 74, 75 – 84 and older than 85 years. In this study, we used the older people classification of WHO to group older adults. The 65–74 years age group was classified as the first group, the 75–84 years age group was the second group, and the ≥85 years age group was the third group.

Curfew was declared for older people on March 21 in Turkey. We started to collect data on May 12. When we started to collect the data, the older people had stayed at home for 50 days. Our study lasted 18 days and we ended the study on May 30.

Assessments

Two forms were used in study. First was an up-to-date form created by researchers with questions about the COVID-19 outbreak and the curfew process. Sociodemographic and health data, and life style of older individuals during the curfew were inquired about with this form.

With this form, the views of the participants about the pandemic and constraints, their behaviors and coping strategies during their stay at home were determined. Table 1 and Table 3 can be viewed to reach the questions in this form.

The second form was the Geriatric Depression Scale Short Form (GDS-15). GDS-15 is a scale which included 15 items consisting of 'yes' and 'no' answers with total points of 15 (11). The study about the validity and reliability of GDS-15 was completed in Turkey with older adults. A cut-off value of 5 points and over is accepted as depression (12). A cut-off of >5 is “suggestive” of depression but requires follow up with a comprehensive assessment while >9 is moderate and >12 is severe indicative of depression (13). Accordingly, depression levels in our study are determined.

Procedure

Face-to-face survey interviews were not possible as older adults were not allowed to go out on the streets and travel was not possible due to restrictions in the country. It was also necessary to reach older people living in other parts of the country, both in urban and rural areas, with different education levels and different socioeconomic status. Two different methods were used for this.

The first method; our students were contacted by the researchers and the lists of their grandparents and elderly relatives who voluntarily agreed to participate in the study were asked. These students were the students of our university's health sciences faculty and health services vocational school. During the period of the study, education at the university was suspended due to the restrictions and our students were staying in their hometown in different parts of the country. Voluntary relatives of students studying in health and geriatrics care departments at some other universities in the country were also added to these lists. The researchers personally contacted the volunteer participants on the list and conducted the surveys. Those who had a smart phone or computer were contacted visually, and those who could not use the internet or were illiterate via phone. The questionnaires were conducted by the researchers by taking verbal consent from the participants and marking the answers on the google form. The second method shared the link to the study on online platforms and social networks and older individuals who volunteered filled the questionnaires. This second data collection technique was carried out via an online platform using Google Forms. In this

method, informed consent was obtained from the participants via google form. Since the names and personal information of the participants were not on the form, the privacy and confidentiality of the person was protected.

The study was submitted and approved by the Ethics Committee of Çankırı Karatekin University, Turkey (Reference Number: 2020/196, Date: 2020, April 17). The study was conducted in accordance with the Declaration of Helsinki. All participants provided informed consent before being included in the study as a participant. Approval was obtained for this research by applying to the COVID-19 Scientific Research Platform of the Republic of Turkey, Ministry of Health (Reference Number: 2020-05-12T23_30_49).

Statistical analysis

Analysis of the data was done using SPSS 25 package program. Descriptive statistics (mean, standard deviation, number and percentile) are given for categorical and continuous variables in the study. The dependent variable of the study is GDS-15 total scores, and independent variables are answers to sociodemographic and other questions in Form 1. When comparing the scores of the scale, which is the

Table 1: Comparison of the descriptive characteristics of the elderly individuals and the mean scores on the geriatric depression scale short form (GDS-15)

Variant	Groups	N	%	MSTS	TS	P
Age	65 - 74 years	946	72.2	4.51 ± 3.53 ^a	14.718	0.001 ^ψ *
	75 - 84 years	268	20.4	4.63 ± 3.51 ^a		
	≥ 85	97	7.4	5.85 ± 3.45 ^b		
Gender	Female	867	66.1	4.94 ± 3.61	-4.221	0.001 [€] *
	Male	444	33.9	4.05 ± 3.31		
Education status	Illiterate	388	29.6	5.36 ± 3.72 ^a	38.273	0.001 ^ψ *
	Literate	240	18.3	4.70 ± 3.37 ^b		
	Primary school	391	29.8	4.43 ± 3.29 ^b		
	Middle School	97	7.4	3.94 ± 3.08 ^c		
	High school	77	5.9	3.20 ± 3.36 ^d		
Living with	University	118	9.0	4.32 ± 4.02 ^b	40.771	0.001 ^ψ *
	Alone	208	15.9	5.12 ± 3.36 ^a		
	Spouse	481	36.7	3.92 ± 3.37 ^b		
	Spouse-child	243	18.5	4.91 ± 3.74 ^c		
	Children	304	23.2	4.88 ± 3.50 ^d		
Chronic disease	Relative/carer	75	5.7	6.00 ± 3.76 ^e	-5.454	0.001 [€] *
	Yes	998	76.1	4.90 ± 3.53		
Psychiatric diagnosis	No	313	23.9	3.78 ± 3.43	-8.228	0.001 [€] *
	Yes	141	10.8	7.14 ± 3.75		
	No	1170	89.2	4.34 ± 3.39		

TS: Test statistics, MSTS: Mean of scale total score (GDS-15), ^{a,b,c,d,e} There was no significant difference between the same letters, [€] Mann Whitney-U Test, ^ψ Kruskal Wallis Test; *Statistically significant p < 0.05

dependent variable, the Mann Whitney–U Test was used in those with 2 independent sociodemographic characteristics, and the Kruskal Wallis Test was used in those with 3 or more categories. In Multivariate Binary Logistic Regression analysis, our main motivation was to evaluate the risk of depressed or non-depressed participants according to the GDS-15 score, multivariably, according to other socioeconomic variables and scores. When the part where the relationship between depression and gender is examined in the discussion section, it becomes clear how important the Multivariate Logistic Regression Analysis is in such a study. For the results of the statistical analysis, p-values of < 0.05 were considered significant.

RESULTS

In this study, we used the older people classification of WHO to group older adults. According to this, percentages of older adults were 72.2%, 20.4% and 7.4%, respectively as young elderly, middle elderly and old elderly. All the descriptive features are given in Table 1. Descriptive characteristics of the participants and GDS-15 mean scores were compared. The relationships between geriatric depression and age older than 85 years, female sex, illiteracy, living alone, having one and more chronic disease and presence of previous psychiatric were statistically significant (p < 0.05) (Table 1).

In our study, a short form of the Geriatric Depression Scale was used and the depression levels of older individuals were measured. The cut-off for the validity and reliability studies done on this scale for the older people living in Turkey was accepted as 5 and above (12). According to our study, the frequency of depression among the older adults during the COVID 19 curfew was found to be 44.2% (Table 2). In a recent study published in 2019 regarding the cut-off value of the scale, the cut-off value was accepted as

5 and above and the level of depression was divided into categories (13). Accordingly, depression levels in our study are given in the table (Table 2) **Table 2.**

The relationship between depression levels and thoughts about COVID-19 disease, lifestyles, experiences, methods of meeting the needs, the ability to use social media and shop online of the aged individuals during the curfew were determined (Table 3). All variables in the study were reviewed with the multivariate binary logistic regression analysis. The depression level of the individuals over 85 years old was 1.777 times more than the 65 – 74 years group (p < 0.05) (OR= 1.77, 95% C.I. = 1.068 - 2.955). Illiterate individuals are 1.860 and 2.025 times more likely to be depressed than individuals with primary and middle school education, respectively (p < 0.05) (OR = 0.53, 95% C.I. = 0.305 - 0.946; OR = 0.49, 95% C.I. = 0.253 - 0.963). Illiterate individuals also have 1.834 times higher depression than individuals with high school education (p < 0.05) (OR = 0.54, 95% C.I. = 0.300 - 0.990). Older individuals who live alone have 1.502 times more risk of depression than other individuals (p < 0.05) (OR = 0.66, 95% C. I. = 0.452 - 0.980). While individuals diagnosed with chronic disease have an increased level of depression by 1.896 times, individuals with psychiatric illnesses have an increased level of depression by 3.299 times (p < 0.05) (OR = 0.52, 95% C.I. = 0.381 - 0.729; OR = 0.30, 95% C.I. = 0.194 - 0.472). Meanwhile individuals who are afraid of transmission of COVID-19 disease have 1.555 times increased level of depression (p < 0.05) (OR = 0.64, 95% C.I. = 0.457 - 0.905). Individuals who meet their needs together with other family members are 1.862 times more likely to be depressed than individuals who meet their needs using multiple options (p < 0.05) (OR = 0.53, 95% C.I. = 0.313 - 0.922). All the multivariate logistic regression results were given in Table 4.

Table 2: Depression levels of the elderly according to the Geriatric Depression Scale Short Form (GDS-15)

Depression	No N (%)	Yes N (%)			Total
		Mild	Moderate	Severe	
		579 (44.2%)			1311 (100%)
	732 (55.8%)				
		355 (27.1%)	163 (12.4%)	61 (4.7%)	

Table 3: Comparison of the thoughts about Covid-19 disease of the aged individuals, their lifestyles during the curfew and the mean scores of geriatric depression scale short form (GDS-15)

Questions / Answers		N	%	MSTS	TS	P
Are you afraid that Covid-19 will infect you?	Yes	1060	80.9	4.78 ± 3.52	-3.413	0.001 ^{€*}
	No	251	19.1	4.04 ± 3.55		
What are you doing to prevent the disease?	Wash hands often	69	5.3	5.75 ± 3.49 ^a	28.281	0.001 ^{ψ*}
	Avoid contact with anyone	344	26.2	5.31 ± 3.71 ^a		
	Eating and drinking well	28	2.1	4.46 ± 3.88 ^{ab}		
	Airing the room often	9	0.7	5.33 ± 4.06 ^{ab}		
	Apply all	861	65.7	4.28 ± 3.40 ^b		
Do you find the curfew for older adults is correct?	Yes	1199	91.5	4.58 ± 3.50	-2.040	0.041 ^{€*}
	No	105	8.0	5.44 ± 3.91		
Have you ever been on the street during this time?	Yes	411	31.4	4.93 ± 3.68	-1.697	0.090 [€]
	No	896	68.3	4.52 ± 3.46		
If yes, for what purpose did you go out?	Basic food shopping	122	9.3	4.71 ± 3.481	2.030	0.730 ^ψ
	Health and other	168	12.8	4.92 ± 3.66		
	Boredom	33	2.5	5.69 ± 4.13		
	For walking	44	3.4	5.36 ± 3.94		
	For multiple occasions	84	6.4	4.66 ± 3.48		
If no, how did you meet your needs?	Household	341	26.0	5.07 ± 3.75	5.136	0.400 ^ψ
	Children/grandchildren whom I don't live with	412	31.4	4.36 ± 3.24		
	Government support	15	1.1	4.26 ± 3.84		
	Online shopping	6	0.5	4.33 ± 3.38		
	By phone from market	35	2.7	4.88 ± 4.22		
	Using multiple options	198	15.1	4.69 ± 3.67		
	No answer	304	23.2	4.50 ± 3.48		
Which social media communication tools do you use?	Online platforms	55	4.2	4.38 ± 3.34 ^{ab}	11.143	0.049 ^{ψ*}
	Social networks	17	1.3	4.35 ± 3.18 ^{ab}		
	Only phone	893	68.1	4.78 ± 3.51 ^a		
	Use multiple options	315	24.0	4.23 ± 3.61 ^b		
Can you shop online?	Yes	134	10.2	4.38 ± 4.06	-1.862	0.063 [€]
	No	1167	89.0	4.68 ± 3.48		
If no, why?	Have no credit card	118	9.0	4.98 ± 3.35	3.192	0.363 ^ψ
	Can't use the computer	652	49.7	4.64 ± 3.47		
	Other reasons	318	24.3	4.60 ± 3.56		
	No answer	223	17.0	4.5 ± 3.80		
What are the most difficult things during the curfew?	Shopping	27	2.1	4.37 ± 3.23 ^{ab}	20.090	0.005 ^{ψ*}
	Going to hospital	43	3.3	5.60 ± 3.66 ^a		
	Boring at home	63	4.8	5.28 ± 3.79 ^a		
	Socially	22	1.7	6.22 ± 4.61 ^a		
	Not seeing my relatives	204	15.6	3.88 ± 3.42 ^b		
	Inactivity	115	8.8	4.79 ± 3.78 ^a		
	Multiple situations	827	63.1	4.68 ± 3.45 ^a		
Choose the status of the following statements in the past 2 months?	None	616	47.0	3.58 ± 3.13 ^a	159.41	0.001 ^{ψ*}
	Increased smoking	19	1.4	6.68 ± 3.62 ^b		
	Gained weight	187	14.3	4.15 ± 3.37 ^c		
	Having sleep problems	305	23.3	5.81 ± 3.39 ^{bd}		
	Multiple situations	176	13.4	6.64 ± 3.75 ^{bd}		

TS: Test statistics, MSTS: Mean of scale total score (GDS-15), ^{a,b,c,d,e} There is no significant difference between the same letters, [€] Mann Whitney-U Test, ^ψ Kruskal Wallis Test; *Statistically significant p < 0.05

DISCUSSION

In this study, the frequency of depression was found to be 44.2% in older individuals during curfew process. The frequency of depression was found to be 37.1% in a study conducted on youth and adults during the COVID-19 outbreak in China (14). In another study conducted during the COVID-19 epidemic process, which also covered all age groups in China, the frequency of depression was found to be 20.1% (15). The frequency of depression was declared to be 4.5% – 37.4% among older individuals

aged 14 - 68 years, levels of 10.2% mild, 17.8% moderate, and 9.1% severe depression were identified (14). In the present study, these rates were 27.1%, 12.4% and 4.7%, respectively. We attribute the high rates in our study to the fact that we included older individuals in the study and that a curfew was applied to all individuals over 65 years of age in our country. In addition, it is not always correct to diagnose depression for the elderly with mild depression, which was 27.1% in our study. This is a risk, follow-up and further evaluation are needed. For

Table 4. Investigation of Factors Affecting GDS-15 with Multivariate Binary Logistic Regression Analysis

Groups	B	S.E.	Wald	df	Sig.	OR	95% C.I. for OR	
							Lower	Upper
Age								
65-74 years ^π			8.812	2	0.012			
75-84 years	-0.247	0.168	2.167	1	0.141	0.781	0.563 (1.77)	
≥ 85	0.575	0.260	4.906	1	0.027*	1.777	1.068	2.955
Education								
			9.493	5	0.091			
Illiterate ^π	-0.062	0.191	0.106	1	0.745	0.940	0.646 (1.54)	
Literate	-0.307	0.177	3.033	1	0.082	0.735	0.520 (1.92)	
Primary school	-0.621	0.288	4.640	1	0.031*	0.537	0.305 (3.27)	
Middle school	-0.706	0.341	4.288	1	0.038*	0.493	0.253 (3.95)	
High school	-0.607	0.305	3.971	1	0.046*	0.545	0.300 (3.33)	
Living								
			12.495	4	0.014			
Living alone ^π	-0.407	0.197	4.251	1	0.039*	0.666	0.452 (2.21)	
With spouse	-0.087	0.240	0.132	1	0.716	0.916	0.573 (1.74)	
Spouse-child	-0.203	0.219	0.857	1	0.355	0.816	0.531 (1.88)	
Children	0.572	0.331	2.997	1	0.083	1.773	0.927 (1.7)	
Chronic disease								
	-0.640	0.165	15.014	1	0.000*	0.527	0.381 (2.62)	
Psychiatric illness								
	-1.194	0.226	27.795	1	0.000*	0.303	0.194 (5.15)	
Fear of Covid-19								
	-0.442	0.174	6.424	1	0.011*	0.643	0.457 (2.18)	
How did you meet your needs during curfew?								
			9.952	6	0.127			
Household ^π	-0.092	0.187	0.243	1	0.622	0.912	0.632 (1.58)	
Relatives I don't live with	0.037	0.644	0.003	1	0.955	1.037	0.294 (3.40)	
Government/support group	-0.403	1.079	0.139	1	0.709	0.669	0.081 (12.34)	
Online shopping	-0.296	0.444	0.445	1	0.505	0.744	0.311 (3.21)	
By phone from market	0.274	0.221	1.540	1	0.215	1.315	0.853 (1.17)	
Using multiple options	-0.622	0.276	5.075	1	0.024*	0.537	0.313 (3.19)	

OR= Odds ratio; C.I. = confidence interval; B = β value; S.E. = standard error; Wald = method; df = degrees of freedom. Odds ratio for negative output coefficients is calculated as Rate: 1 / e^β, *Statistically significant (p < 0.05), π Indicator (For categorical variables; on each variable, for GDS-15 score; according to the indicator variable, other variables were compared in terms of Odds ratios), (For continuous measurement variables; the increase or decrease in the scores was evaluated in terms of Odds ratio, 1 / e^β value was taken for cases where the Odds ratio was negative)

(12). As a result of the 44% rate in the present study, we see that the COVID-19 outbreak and the curfew process increased the level of depression in the older people.

During the COVID-19 outbreak, a study of adults between the ages of 26 - 60 in Spain identified 9.4% mild, 5.6% moderate, 2.1% severe and 2.9% very severe signs of depression (16). In a study conducted in China after the outbreak that included individuals

the elderly with moderate and severe depression, 12.4% and 4.7%, it would be correct to say that they are depressed with more confident sentences.

When a study about the frequency of depression among older individuals before the COVID-19 epidemic is examined, the depression levels of the group aged 85 and over were higher than the other older groups (17). In the present study, similar results were found in the older people during the curfew.

Immobility increases sarcopenia and demineralization in the older adult. These events increase the need for care in the older people creating a greater risk of depression and are more pronounced over 85 years of age.

In a study conducted about youth and adults, no correlation was found between gender and depression during the COVID-19 epidemic (14). However, in another study of adults during the COVID-19 epidemic, levels of depression were higher in females than in males (16). In a study conducted in Spain during the constraints during the COVID-19 pandemic process, depression was studied in all age groups, and the level of depression was found to be higher in both adult and elderly women than men (18). When past studies are examined, it is clearly seen that the frequency of depression in females was higher than in males (19). When we analyze with the Mann Whitney-U Test, our study confirms these findings from other studies, but when we analyze with multivariate binary logistic regression, the gender difference had no effect on depression in the older people during the curfew imposed due to COVID-19. The comparison test of univariate group rank values makes only one assessment independent of other variables by comparing the total scale scores. Regression analysis is a multivariate model that results from the interaction of all variables, according to how they act together. We think that the reason for the equal level of depression in the present study and the high value for this rate in females in previous studies is the absolute equality in living standards of men and women due to the curfew. The result shows that the older adults carry an equal risk of depression under the same living conditions, regardless of gender.

In a study conducted in Korea with a large sample group of adults and older people over the age of 45, the level of depression decreased as the level of education increased (20). We found similar results in the present study. In the present study, the level of depression in the illiterate older individuals was higher than among those who were primary school, middle school and high school graduates. The COVID-19 curfew was very difficult for the older individuals who were forbidden to leave the house and were illiterate. These individuals could read books and newspapers or use computers in their homes. As expected, the level of depression was high in the aged who could not read.

In a study conducted among the older adults living in the city center of Ankara in our country before the COVID-19 process, a negative correlation was reported between the number of persons in the household and the geriatric depression scale score (21). Similarly, In the present study, the mean geriatric depression scale (GDS-15) of the older adults living alone was higher than for those living with their spouse, children or both their spouse and children. This result is an indication that the older people are protected within the traditional family structure and that family support is very effective in preventing psychological disorders in the older people.

In a study conducted during the COVID-19 epidemic process and involving all age groups, a positive relationship was found between the presence of chronic disease and the level of depression (22). The presence of chronic disease and depression were statistically significant in the present study, which we conducted only for the advanced age group.

We know that the presence of previous psychiatric illness in the COVID-19 epidemic increased depression in all age groups (22). This result did not change in the present study for the older group.

An important effect of the COVID-19 outbreak is the feeling of uncertainty in individuals. Uncertainty increases anxiety in relation to the current problem. Therefore, depression scores were high in individuals with anxiety and there are important connections between anxiety and depression and occurrence of viral diseases (23). In addition, COVID-19 news or seeing someone with the infection increase anxiety and depression. Knowing someone quarantined for Ebola was independently associated with anxiety and depression (24). Similarly, 39% of the public stated they had anxiety about avian influenza in France (25) while 16% of the public felt anxious during the early stage of the influenza A (H1N1) outbreak in the Netherlands (26). Higher levels of stress, anxiety, and depression are predicted after a stay at home because imprisonment may tend to produce or intensify these psychological problems (27). Similar to many other studies, depression was higher in those who were worried about getting COVID-19 disease in the present study. The important situations that create anxiety during outbreaks are panic, uncertainty and feelings of being out of control. In this context, individuals who believe curfew is correct may feel safer. Depression scores may be lower as the feeling that the outbreak is under control will reduce anxiety

of individuals. Individuals who feel socially safe are more optimistic and hopeful about leading their lives (28). In present study, the older people felt safe at home and found the curfew was correct.

The studies reported that the COVID-19 epidemic caused anxiety, depression, sleep quality impairment and increased tobacco consumption in humans (29, 15). Similarly, in the present study, the mean score for depression, which increases smoking and suffers from sleep problems, was high.

Limitations

There are several limitations in our study. First, there were many restrictions in the country and it was impossible to meet face to face. Second, most of the older adults in the country cannot use the internet and smart phones. Thus, the link we sent online did not reach them or the older adults could not complete the questionnaire. For this reason, the volunteer relatives of our students were called by the researchers and surveys were conducted. Although the study includes a large sample group, it cannot be generalized to the whole society.

Strengths

The study has many strengths. The most important is that it involved participation of older individuals from all over the country and has a large sample size. These older people were both living in urban and rural area. Also, most of the data collected in the study were reliable and real information because data were collected by researchers who reach the participants via internet or telephone. During the COVID-19 outbreak, schools were closed and students were at home in their own cities and villages. They asked to their grandparents and relatives whether they volunteered to participate in the research and supported the research by giving us a list of participants. Thus, the illiterate older adults were also reached, and the sample covered every segment of the older people in the country.

Suggestions

The older people population in many countries in the world is increasing rapidly. Countries should be prepared for this. Older people should be registered by the relevant ministries. Electronic health records of the older adults should be recorded. Just like in family medicine practice, every older person should be connected to a gerontologist or public health specialist. In quarantine situations, these professionals should be in constant contact with the older adults by telephone or video chat. During this communication, nurse and psychiatrist support

should be provided to the older adults with chronic disease, psychiatric diagnosis or high GDS scores. In pandemic situations, policies that can meet the needs of the older adults should be applied without discrimination of age, taking into account the factors that trigger depression in this article.

CONCLUSION

In the following years, measures to be taken in case of epidemics will always be on the agenda of all countries of the world. We hope that the results of our study will serve as a guide for the policies that countries will determine in case of epidemics.

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