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## RESEARCH

# RELATIONSHIP BETWEEN PERCEIVED AGEISM, AUTONOMY, AND SYMPTOMS OF DEPRESSION AND ANXIETY DURING THE COVID-19 CURFEW IN OLD AGE PSYCHIATRIC PATIENTS

## ABSTRACT

**Introduction:** Restrictive measures were taken to protect people aged 65 years and older during coronavirus pandemic; however, these measures negatively affected their physical and mental health. Ageist attitudes and age discrimination have also become evident during the pandemic. This study aimed to evaluate the relationship between perceived ageism, sense of autonomy, perceptions of curfews, and anxiety and depression levels in older psychiatric patients who comprised a vulnerable and disadvantaged group during the pandemic.

**Materials and Methods:** In this cross-sectional study, 171 participants older than 65 years, followed up at Hacettepe University Psychiatry outpatient clinic between December 2019 and February 2020, were interviewed via phone using a survey on sociodemographic characteristics, measures of perceived ageism and autonomy, Generalized Anxiety Disorder Scale, and Geriatric Depression Scale-Short Form.

**Results:** Of 171 total participants, 57 (34.8%) reported an increase in perceived ageism during the pandemic. Almost one-third of the participants found the curfew decisions for the elderly to be unsuitable. Participants with higher education levels and those who found curfews for the elderly inappropriate showed a greater increase in perceived ageism scores ( $p<0.001$ ). Additionally, perceived ageism scores were significantly correlated with depression and anxiety ( $p<0.001$ ). Anxiety and depression scores were significantly lower among participants who reported more autonomy in their lives ( $p<0.05$ ).

**Conclusion:** During pandemic, state and health authorities should consider the needs of vulnerable groups, such as older individuals and psychiatric patients, when making plans, and ensure that these groups are minimally affected by the disease, restrictive measures, and ageist attitudes.

**Keywords:** Ageism; Aged; Pandemics; Depression; Anxiety.

## INTRODUCTION

Ageism is a type of discrimination that is widespread but insidious in every society in the modern world (1). Although identified as the third most common type of discrimination after racism and sexism, it remains largely unnoticed (2). Discrimination can occur with any age group, however, at present times, it is generally targeted towards older people. Older people are considered slower and less efficient, and thus incompatible with the requirements of today's society. Ageist stereotypes and negative attitudes towards older adults are shared by both public and state authorities. Ageist attitudes become more visible in times of crisis; older people are seen as a burden on society because of their vulnerability and need for care, especially when resources are limited (1). During the coronavirus disease (COVID-19) pandemic, many cases of age discrimination have occurred worldwide.

At the beginning of the COVID-19 pandemic, individuals aged older than 65 years constituted most of the death rate reported globally (3). Health and state authorities had taken additional measures to reduce the impact of COVID-19 on older people. However, the measures taken in many countries negatively impacted the lives of older adults by applying strict restrictions for the elderly, including stay-home orders for those aged 65 years and older, quarantines, and restrictions on nursing home visitations (4).

The Turkish government has taken some additional protective measures to prevent the spread of COVID-19. On March 21, 2020, during the initial period of the pandemic, the Ministry of Interior issued a statement that people aged 65 years and older with comorbidities were prohibited from going out on the street (5). On May 10, 2020, people older than 65 years were allowed to go out from 11:00 to 15:00, for four hours daily; in the course of pandemic, these restriction hours were changed according to the number of cases occurring. These direct measures to lower old-age mortality restricted elderly cit-

izens' daily activities and independence. In addition to these measures, disruptions in preventive health-care and management services, and long-term care services increased the indirect negative effects of the pandemic on the elderly. Although these precautions and prohibitions against elderly individuals were implemented only in Turkey, protective measures aimed at older people have also been implemented in other countries (6,7). Different policies were implemented by every country to protect older people; however, ageism has taken similar forms in all of these. Older persons were deemed expendable due to their lack of contribution to the economy and production. The government of the United Kingdom adopted the herd immunity concept, implying that the weaker population could be sacrificed for the sake of the community, to avert economic catastrophe (7). In Italy, ethical guidelines by the Italian Society of Anesthesia, Analgesia, and Intensive Care (SIAARTI) were released for the allocation of treatment in resource-limited situations, suggesting that an age limit could be set for admission to intensive care units (8). The public, unfortunately, shared the ageist attitudes of policymakers; older people were viewed as a drain on society, and the incidences of name-calling and blaming rose (7).

During these times, all precautions, including those for older adults, were implemented by health or state authorities, but older individuals were not allowed to express their opinions or participate in decision-making processes regarding their lives. The application of these protective measures to older adults without their consultation and without considering the negative impact of these measures can be considered ageist.

The restrictions mentioned above have been put on the agenda to protect the older persons, but non-governmental organizations such as medical professional organizations and elderly rights organizations have pointed out that these restrictions and prohibitions on older individuals negatively affect both their mental and physical health (9). It is known



that the feeling of isolation or loss of social relationships has detrimental effects such as deterioration in immune system functions and sleep disturbance (10), a decrease in cognitive functions, and an increase in depression and other negative emotions (11). The World Health Organization (WHO) reported that measures such as self-isolation and social distancing can cause anxiety, anger, agitation, and withdrawal (12). In a longitudinal study, social disconnection and perception of isolation were associated with anxiety and depression symptoms in older individuals (13).

Among old age individuals, older psychiatric patients are a more vulnerable group than the older persons who do not have any mental health problems (14). Individuals with pre-existing mental health problems constitute a disadvantaged group regarding the discrimination towards them. Old age psychiatric patients, in addition to the burden of aging, are more exposed to prejudiced attitudes related to mental illness, discrimination, and age-related discrimination (15).

Many short comments and expert opinions have been published about the psychological effects and other possible negative consequences of the pandemic and the impact of protective measures and ageist attitudes on the older people in different settings. It is, however, noteworthy that there are relatively few research articles examining psychiatric issues in older people. Many articles discussing COVID-19 mentioned ageism, but few incorporated the perspectives and opinions of the older adults themselves. Furthermore, to the best of our knowledge, no study about ageism has been conducted in elderly patients with psychiatric disorders. This study aimed to contribute to the current literature by evaluating the relationship between perceived ageism and changes in perceived ageism levels, perceptions of curfews, and anxiety and depression levels in elderly psychiatric patients during the COVID-19 pandemic.

## METHODS

### Participants

All patients aged > 65 years who had applied to Hacettepe University Psychiatry Clinic between December 2019 and February 2020, without a diagnosis of dementia or mild cognitive impairment (MCI), were contacted from October 1 to November 1, 2020, through phone numbers registered in our hospital system. Patients were interviewed using a survey that included questions on socio-demographic measures, diagnoses, treatment, medications received, quality of healthcare during the lockdown; perceptions of the lockdown; and scales on perceived ageism, depression, and anxiety. This study was planned and conducted as part of a large-scale study aimed at evaluating various aspects of older psychiatric patients during the pandemic at the Hacettepe University Department of Psychiatry. Inclusion criteria for the study were aged 65 years and older, Turkish speaking, and voluntary participation in the study. Exclusion criteria were the diagnosis of dementia or MCI, conditions that prevented communication on the phone (loss of hearing and speech problems), and any other neurological disease impairing judgement and communication skills. No fees were paid to participants. The study was approved by the Ministry of Health and the Hacettepe University Ethics Committee. Verbal informed consent was obtained from all the participants.

### Scales

#### *Sociodemographic Form*

The sociodemographic characteristics of the participants were evaluated with a sociodemographic form including single-item questions evaluating thoughts and perceptions about curfew practices for the elderly and perceptions of physical and psychological well-being. The sense of autonomy and the change in autonomy after the pandemic were evaluated using 1-question survey. Psychiatric

diagnoses of the participants were extracted from electronic hospital records.

### **Perceived Ageism Measure**

Perceived ageism was assessed using a measure of everyday discrimination designed to evaluate interpersonal forms of daily experiences of discrimination (16). In the original form, ten items were used to measure everyday discrimination, and response values for each item consisted of five alternative answers. In our study, we adapted the questions and choices for age discrimination. Six items were used to measure everyday discrimination based on age: being discriminated solely based on age, being treated with less courtesy and respect, being treated as not smart, being insulted or threatened, receiving less benefit from healthcare services, and feeling unimportant and worthless. The answers to these items were constructed as follows: most of the time, sometimes, and never. Decreasing scores on this measure indicated increasing levels of perceived ageism.

We also asked how perceived ageism changed during the pandemic period, and the answers for this item were: decreased, no change, and increased.

### **Geriatric Depression Scale Short Form (GDS-SF)**

The Geriatric Depression Scale Short Form (GDS-SF), consisting of 15 questions developed by Sheikh and Yesavage to evaluate depressive symptoms in older people, was used in this study (17). The validity and reliability study was conducted by Durmaz et al. in Turkish (18). Every question on the scale has a yes-no answer, and the range of the score is 0–15, with higher scores indicating more depressive symptoms. In Turkish study, the cut-off point was determined to be 5 and above.

### **Generalized Anxiety Disorder Test 7 (GAD-7)**

The GAD-7 is a short self-reported test developed by Spitzer et al. (2006) according to Diagnostic and Statistical Manual of Mental Disorders-IV (DSM-IV TR) criteria and is used to evaluate generalized anxiety disorder (19). It is a 7-item four-point Likert-type scale (0=never, 1=many days, 2=more than half of the days, 3=almost every day) used to evaluate symptoms of anxiety within the last two weeks. The scores obtained vary from 0–21. In the original study, the cut-off scores obtained from the scale were 5, 10, and 15 for mild, moderate, and severe anxiety, respectively. The scale's adaptation to Turkish, validity, and reliability were conducted by Konkan et al. in 2013. In this study, the cutoff point of the scale was determined to be 8 and above (20).

### **Statistical Analysis**

SPSS 22.0 program for Windows (SPSS Inc, Chicago, IL, USA) was used for statistical analysis. Categorical variables were presented as numbers and percentages, and continuous variables, such as age, were presented as means and standard deviations. Relationships between various variables were investigated using the t-test, chi-square analysis, ANOVA, or correlation analysis methods according to the nature of the data. The significance value was set at  $p < 0.05$ .

## **RESULTS**

### **Sociodemographic Characteristics**

A total of 171 older psychiatric patients were included in this study. The sociodemographic characteristics and distribution of the psychiatric diagnoses of the participants are shown in Table 1.

### **Findings Related to Depression and Anxiety**

Of 171 total participants, 45 (26.5%) had a score of 5 or above on GDS-SF, implying the presence



**Table 1.** Sociodemographic characteristics of the participants

Gender	n (%)
Women	119 (69.6)
Men	52(30.4)
Age, mean $\pm$ SD, years	72 $\pm$ 5.90
Marital status	n (%)
Married	109 (63.7)
Other	62 (36.3)
Household status	n (%)
Living alone	35 (21.9)
Living with family	132 (78.1)
Education	n (%)
Primary + Middle School	94 (55.7)
High School + University	75 (44.3)
Psychiatric diagnosis	n (%)
Depression	102 (60)
Anxiety Disorders	25 (14.7)
Bipolar Affective Disorder	21 (12.4)
Schizophrenia	11 (6.5)
Other	4 (2.4)

of depressive symptoms. Those who scored 8 or above on the GAD-7 test are accepted to have generalized anxiety disorder symptoms, and 32 of our participants (18.8%) scored 8 or above on this test. Depression and anxiety scores did not differ according to gender, marital status, or household status (living alone vs. living with family). While depression was more prevalent in the lower-education group than in the higher-education group, there was no difference in anxiety among the different education levels.

During the pandemic, 49 (28.8%) participants reported newly added psychiatric symptoms and increased severity of their psychiatric illness. Both anxiety and depression scores differed significantly at the different autonomy levels. Anxiety scores were significantly lower in participants who reported more autonomy ("I make my decisions always or most of the time" vs "I never make my own de-

isions"), and depression scores were significantly lower in participants who reported more autonomy in their lives. The results of the depression and anxiety scores are presented in Table 2.

### Curfews and Their Effects

Regarding the question, "Can you describe your mood during the curfews?", 28.5% of the participants answered "good," and the remaining participants defined their mood as "anxious, sad, depressed, angry, reluctant-stagnant" and others. Depression and anxiety scores in the group with negative mood states were higher than those in the other group, as expected. A total of 65.1% of the participants reported that the curfew negatively affected their mood; anxiety scores were higher in this group, but there was no difference in the depression scores (Table 2).

A total of 111 participants (69.3%) stated that their physical activity level decreased during the pandemic, but no difference between depression and anxiety scores was found between this group and the group with the same activity level. During the curfew period, 70 (41.7%) stated that their physical health deteriorated due to the restrictions. The total GAD-7 score of the group whose physical health deteriorated was significantly higher than that of the group with no deterioration in physical health, but no difference was found in depression scores (Table 2).

Half of the participants (50.6%) found the curfew decision for people older than 65 years to be appropriate, 15.9% found it appropriate but insufficient, and 30.0% found it unsuitable. Individuals with higher education reported that they did not approve of the restrictions at a significantly higher rate than those with lower education ( $X^2=21.68$ ,  $p=0.001$ ). The most common reason for the disapproval of curfew for the elderly was "thinking it as a reflection of discrimination against the elderly" (25.3%), while the least common answer was "I could not meet my

**Table 2.** The relationship of depression and anxiety scores with sociodemographic characteristics and with variables about curfews

Variable n (%)	GDS (Mean±SD)	p Value	GAD-7 (Mean±SD)	p Value
Gender <sup>a</sup>				
Women	3.55±3.42	0.65	4.38±4.16	0.951
Men	3.27±3.69		4.43±5.19	
Marital status <sup>a</sup>				
Married	3.37±3.75	0.634	5.01±5.202	0.080
Other	3.65±2.99		3.31±3.05	
Household status <sup>a</sup>				
Living alone	3.75±3.52	0.637	4.08±4.09	0.654
Living with family	3.42±3.51		4.47±4.60	
Education <sup>a</sup>				
Primary + Middle School	4.14±3.88	0.005*	4.92±5.16	0.720
High School + University	2.64±2.78		3.70±3.35	
Autonomy <sup>b</sup>				
" I make my own decisions"				
Always/most of the time 107 (69.4)	3.02±3.23	0.001*	4.13±4.31	0.020*
Sometimes 37 (24)	3.61±3.39		4.51±4.34	
Rarely or never 10 (6.4)	7.77±4.26		8.2±6.25	
Mood during the curfews <sup>a</sup>				
Good 47 (28.5)	1.68 ± 1.51	0.001*	2.36±2.74	0.001*
Other (negative mood states) 118 (71.5)	4.26 ± 3.83		5.32±4.82	
Effect of curfew on mental health <sup>a</sup>				
Negative 110 (65.1)	3.81 ± 3.61	0.093	5.28±4.80	0.001*
No effect 59 (34.9)	2.83 ± 3.21		2.84 ± 3.33	
Change in physical activity level during curfew <sup>a</sup>				
Decreased 111 (69.3)	3.78±3.47	0.077	4.68±4.56	0.231
Not changed 48 (30.7)	2.70±3.53		3.75±4.33	
Physical health deteriorated during curfew <sup>a</sup>				
Yes 70 (41.7)	3.59±3.34	0.528	5.25±4.46	0.039*
No 98 (58.3)	3.24±3.52		3.76±4.45	

<sup>a</sup> = Student t test, <sup>b</sup> = ANOVA, \* p < 0.05



essential needs" (5.3%). The scores for depression and anxiety were not different among the groups with differing opinions regarding the curfews.

( $F_{(2,155)} = 0.58, p = 0.560$  and  $F_{(2,157)} = 0.90, p = 0.915$ , respectively).

### Perceived Ageism

Baseline perceived ageism in our sample ranged from 2.4% ("ever threatened or been harassed due to your age?") to 19.4% ("ever felt discriminated solely based on your age?").

A negative correlation between perceived ageism total scores and GDS-SF total scores was found; meaning that as perceived ageism increased, depression scores also increased. Likewise, a negative correlation existed between perceived ageism and the YAD-7 total scores (Table 3).

A total of 57 participants (34.8%) reported an increase in perceived ageism during the pandemic. Age, autonomy, depression, and anxiety scores did not differ significantly between participants who had an increase in perceived ageism and those without. A greater increase in perceived ageism was observed in participants with higher education levels than in those with lower education; participants who found the curfews for the elderly inappropriate had a greater increase in perceived ageism than that in the other groups (Table 4).

### DISCUSSION

To the best of our knowledge, this is the first study to examine how the physical and mental health of psychiatric patients aged 65 years and older was affected by curfews implemented for older people during the COVID-19 pandemic, and how perceived ageism affected the psychological state of these patients. Although the restriction measures were implemented to protect the elderly, the risk of negative consequences have been discussed by health professionals, rights defenders, the general public, and the media since the beginning of the pandemic. Although studies examining the effects of ageist attitudes on the elderly have been conducted during the pandemic, the perspectives and opinions of older adults on ageism have not been investigated. Moreover, older psychiatric patients who were more exposed and vulnerable to ageist attitudes have not been studied.

One-fourth of our sample was diagnosed with depression according to the GDS-SF scale, and approximately one-fifth of them were diagnosed with anxiety disorder according to the GAD-7 scale. Individuals with low education levels were found to have a higher rate of depressive symptoms, and individuals in this group were more likely to be affected by restrictions. Although income levels were not assessed in this study, low education levels are expected to be associated with low income, and

**Table 3.** Correlation analysis of perceived ageism with anxiety and depression scores

Variables	Pearson's correlation analysis			p Value
	M	SD	r Value	
GAD-7 total score	4.4037	4.47965	-.347*	0.001
GDS total score	3.4717	3.50192	-.308*	0.001

GAD-7: Generalized Anxiety Disorder Scale, GDS-SF: Geriatric Depression Scale-Short Form

M=mean, SD= standard deviaton, r= correlation coefficient; p= significance

\*Correlation is significant at the 0.01 level (2-tailed).

**Table 4.** Change in perceived ageism during pandemic

		Not changed	Increased	p Value
n		107	57	-
Age Mean ± SD <sup>a</sup>		72.308±.595	71.175±.740	0.249
Gender <sup>c</sup>	Women	79(68.10%)	37(31.90%)	0.232
	Men	28(58.30%)	20(41.70%)	
Education <sup>c</sup>	Primary +Middle School	71(78.00%)	20(22.00%)	0.001*
	High School +University	35(48.60%)	37(51.40%)	
Thoughts on curfews <sup>b</sup>	"found appropriate"	67 (78.80%)	18 (21.20%)	0.001*
	"appropriate but insufficient"	18 (66.70%)	9(33.3%)	
	"found inappropriate"	21(41.2%)	30(58.80%)	
Autonomy <sup>c</sup>	No change	84(67.70%)	40(32.30%)	0.275
	Decreased	19(57.60%)	14(42.40%)	
GDS-SF Scores <sup>a</sup>		3.60±3.68	3.05±2.90	0.333
GAD-7 Scores <sup>a</sup>		4.29±4.63	4.33±3.71	0.953

GAD-7: Generalized Anxiety Disorder Scale, GDS-SF: Geriatric Depression Scale-Short Form

<sup>a</sup> = Student t test, <sup>b</sup> = ANOVA, <sup>c</sup> = chi square test, \*  $p < 0.05$

low-education/low-income people might have limited resources for coping with sudden crises, which could explain the higher rates of depression.

Contrary to our expectations, anxiety and depression rates were not affected by marital status, conditions such as single-family living, or the presence of financial difficulties. The fact that most of the group was composed of individuals living in big cities and relatively similar in terms of socioeconomic and living conditions can explain this situation. By examining groups living in rural areas with different socio-economic and cultural life practices, more precise results can be obtained in this regard.

Most participants in the study reported decreased physical activity level, but depression and anxiety scores did not differ between the groups who reported decreased physical activity and those who did not. Many studies have reported that physical activity is protective in terms of mental health. In

a study conducted in Norway during the COVID-19 period, the depression and anxiety levels of adults who were members of a regular activity group were found to be lower than the general population average (21). In the same article, it was also reported that physical activity had no effect on mental health during the pandemic period, which is consistent with our findings. In contrast, in our study, the anxiety scores of those who reported that their physical health was impaired during the pandemic were higher than those who did not report any deterioration in physical health. Physical activity and physical health are related but different concepts. Examining the relationship between physical health and physical activity levels can help us understand the effect of physical activity on mental health.

In our study, baseline perceived ageism was positively correlated with anxiety and depression scores. This finding is in accordance with previous studies reporting that older adults who perceive





ageism are likely to have a negative self-perception of aging and an increase in depressive symptoms (22). Depression and anxiety scores did not differ between participants who had increased perceived ageism during the pandemic and those who did not. This finding was contrary to our hypothesis that increased perceived ageism would be related to increased depression and anxiety scores; however, this might be due to the small sample size or the existence of other factors that might affect depression and anxiety scores during the COVID-19 pandemic, which we did not measure. Another reason for this finding could be the lower prevalence of baseline perceived ageism in our sample than in other populations (23).

Although 65% of our participants reported that the curfews negatively affected their mood, only 30% reported that they did not find these restrictions appropriate. Among the participants with a higher level of education, the rate of disapproval of the restrictions aimed at the older persons was found to be much higher. In addition, the perceived ageism scores increased during the pandemic in the group that disapproved of restrictions. These people may have associated the restrictions targeting the elderly with ageism, since highly educated people are more active and independent in their daily lives, and thus are more affected by the restrictions compared to the lower education group, who might have more family ties and social support in a traditional lifestyle and environment.

During the pandemic, protective measures including "social distancing" and stay-at-home" orders and curfews in some countries were implemented, but those measures caused negative consequences, especially for older adults. Individuals with psychiatric diseases are among the vulnerable groups in society (24), and older psychiatric patients constitute a more vulnerable group with the addition of physical and mental burden due to the advanced age (15). It is important for this group of patients to meet their daily needs, have opportu-

nities for social interaction, and access to health-care services. Older psychiatric patients could be expected to be affected more by the protective measures taken for the pandemic than the same age population with no psychiatric disorders, considering the possible adverse conditions they have, such as a restricted social environment, greater disease burden, and increased need for healthcare. While ordering restrictions and taking measures to prevent the spread of the epidemic, the needs of vulnerable groups in society should be prioritized. In Turkey, the Psychiatric Association of Turkey has informed the public about the psychological effects of the pandemic and restrictive measures since the first day of the pandemic and has made recommendations for many groups of society, including psychiatric patients. Recommendations have also been published for the most vulnerable groups, including people aged older than 65 years and their relatives (25). In addition to these protective measures and recommendations, state authorities, rights advocacy groups, and the media should also work on measures to decrease ageist attitudes towards older people.

### Limitations

This study has some limitations. Due to limited access to outpatient services at the time of the study, all surveys were conducted using phone, and people with hearing loss and difficulties in understanding the questions were excluded from the study; therefore, a vulnerable group that is more likely to be adversely affected by social isolation and ageism was excluded from the study. The lack of pre-COVID-19 period scale scores and longitudinal evaluation may have created a bias since most of the participants had psychiatric diagnoses and were under psychiatric treatment at the time of the study, making it difficult to interpret the scale scores. Different psychiatric diagnoses might affect the coping mechanisms and reactions to the pandemic, however evaluating the effect of these diagnoses would

not be possible in a small sample. Likewise, only generalized anxiety symptoms were evaluated but a diagnostic evaluation was not performed including different anxiety disorders like panic disorder, agoraphobia or health anxiety disorder in this sample.

The distribution of the people participating in the study by socioeconomic groups is different from the country average; the higher socioeconomic groups are more represented among the participants; therefore, the results cannot be generalized to the entirety of older psychiatric patients. These limitations should be considered when evaluating the results of the present study.

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## CONCLUSION

The COVID-19 pandemic has seriously affected and continues to affect society in terms of physical and mental health, in both direct (effect of the disease) and indirect (owing to the restrictive measures taken to prevent its spread) ways. During the pandemic, the state and health authorities need to consider the needs of more vulnerable groups, such as older individuals and psychiatric patients, when making plans and implementing preventive strategies, and ensure that these groups are minimally affected by the disease, restrictive measures, and ageist attitudes.

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