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The Relationship between Perceptions and Attitudes Towards the Covid-19 Pandemic and Perceptions of Aging and Old Age among Academics Aged 65 and Above

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Abstract

This study examines the relationship between perceptions and attitudes towards the COVID-19 pandemic and perceptions of aging and old age among academicians aged 65 and above. The sample consists of academics aged 65 and over from all universities in Turkey (208 universities). The study was completed with feedback from 187 participating academics.Data were collected through an online survey using a Google Form. The survey included a demographic questionnaire and scales to assess perceptions of COVID-19 and attitudes towards aging and old age. Ethical approvals and informed consent were obtained from participants. Data analysis involved descriptive statistics and Pearson correlation using SPSS 25.0 software. The findings reveal that approximately half of the senior academics had chronic illnesses, and about one-third had contracted COVID-19. More than half of the participants reported negative impacts of pandemic restrictions, disruptions in academic activities, and discomfort with the association of chronological age with old age. Statistical analysis demonstrates a significant positive relationship between perceptions and attitudes towards COVID-19 and perceptions of aging among elderly academics ($p<0.05$). This study highlights the interconnectedness of resistance to aging, avoidance behaviors, and positive attitudes towards COVID-19 among elderly academicians. These results suggest that perceptions of aging and attitudes towards the pandemic are intertwined in this population.

Keywords

Elderly, attitude, perception, universities, COVID-19

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La Relación entre Percepciones y Actitudes hacia la Pandemia de COVID-19 y Percepciones del Envejecimiento y la Vejez entre Académicos de 65 años y Más

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Resumen

Este estudio investiga la relación entre las percepciones de la pandemia de COVID-19 y las actitudes hacia el envejecimiento en académicos de 65 años o más en Turquía, abarcando 208 universidades. Se utilizó una encuesta en línea, recopilando datos demográficos y escalas para evaluar las percepciones del COVID-19 y las actitudes hacia la vejez. Los resultados muestran que la mitad de los académicos mayores tenía enfermedades crónicas y un tercio había contraído COVID-19. Más de la mitad reportó efectos negativos de las restricciones pandémicas, interrupciones académicas e incomodidad con la asociación de la edad cronológica con la vejez. El análisis estadístico, realizado con SPSS 25.0, encontró una relación positiva significativa entre las percepciones del COVID-19 y las actitudes hacia el envejecimiento ($p<0.05$). El estudio subraya cómo la resistencia al envejecimiento y los comportamientos de evitación están vinculados con actitudes positivas hacia el COVID-19 en esta población, sugiriendo que estas percepciones están interconectadas.

Palabras clave

Personas mayores, actitud, percepción, universidades, COVID-19

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The Covid-19 pandemic has had a significant impact on elderly individuals, leading to more severe outcomes and increased mortality rates compared to other age groups (WHO, 2022; Başaran, 2021; Tisminetzky et al., 2022; General Directorate Of Public Health, 2020; Zhou et al., 2020; Pan et al., 2020; Biswas et al., 2021). To protect the elderly, various preventive measures, such as social isolation and minimizing close contacts, have been implemented. However, these measures have resulted in feelings of exclusion and, in some cases, neglect and abuse (Ayhan Balık & Bilgin, 2022).

In many countries, the elderly have experienced social exclusion and stigmatization as carriers of the virus. They have been ridiculed and belittled on social media platforms, leading to marginalization and segregation from society (Güneş & Çelebi, 2021; Skoog, 2020; Türk, 2020; Taşdelen, 2020; Dirini & Göksu, 2020; Yaşar & Avcı, 2020; Çiçek & Mercan, 2020). These negative perceptions and behaviors towards the elderly have resulted in their scapegoating and labeling as irresponsible for endangering society (Dirini & Göksu, 2020). These experiences have accelerated the transition to old age for elderly individuals, making them feel that their lives are worthless and insignificant (Escourrou et al., 2022; Verhage et al., 2021). Some elderly individuals refuse to accept their vulnerability during this period and do not consider themselves part of the elderly group (Verhage et al., 2021). Factors such as education, economic status, marital status, family structure, sociocultural factors, loneliness, and the inability to adapt to technology have been found to shape the perception of old age and contribute to elderly discrimination and exclusion (Çetin, 2019; Duvan & Davran, 2022; Dağlı, 2018).

Academics aged 65 and above, like other elderly individuals, have been negatively affected by the pandemic, experiencing weakened feelings during the isolation period and restricted social spaces (Alparslan et al., 2021; Şenol & Taştan, 2021; Aktaş, 2022). During the Covid-19 pandemic, alongside society's renewed cultural awareness towards the elderly, perceptions of them as contagious and the various reactions elicited have led to stigmatization of the elderly (Özdemir, 2020; Yaşar & Avcı, 2020). Health workers have a crucial role in changing negative perceptions of old age and promoting healthier and more conscious participation of elderly individuals in society, especially during crisis periods like pandemics. Understanding the relationship between perceptions and attitudes towards the Covid-19 pandemic and perceptions of aging and old age among academics aged 65 and above can provide valuable insights for future pandemic response and support programs (Kaçan et al., 2021; Losada et al., 2021; Chang et al., 2020). Therefore, this study aims to determine the relationship between perceptions and attitudes towards the Covid-19 pandemic and perceptions of aging and old age among academics aged 65 and above. By examining these relationships, this study seeks to contribute to a better understanding of the interconnectedness of aging perceptions and pandemic attitudes among the elderly population.

The specific hypotheses for the study are as follows:

H1: There is a significant positive relationship between perceptions and attitudes towards the Covid-19 pandemic and perceptions of aging among academics aged 65 and above.

Methods

Type of Research

This study is an exploratory correlational research, aiming to examine relationships between variables without establishing causation. This method is particularly suitable for exploring patterns and connections among variables that have not been extensively studied or understood previously. Researchers can test hypotheses by observing relationships that vary across different conditions or populations, laying the groundwork for future research directions (Johnson &Christensen, 2020).

Participants

The study population included academics aged 65 and above working in a total of 208 universities in Turkey, comprising 79 foundation universities and 189 state universities. No sampling was conducted, and the study relied on voluntary participation. The survey link was distributed to all 208 universities. The study was completed with voluntary participation from 187 respondents providing feedback. The survey did not include a question indicating the affiliation of the participating academics with their respective universities. Hence, the universities from which feedback was received remain unidentified. To ensure sample adequacy, a power analysis was performed using the "G. Power-3.1.9.2" program. The analysis revealed an effect size of 0.207 at a significance level of α=0.05, and the post-hoc calculated power of the study was found to be 0.81. The minimum acceptable power value for post-hoc analysis is 0.67, indicating that the achieved power level is satisfactory, and the data is considered sufficient.

Data Collection

Data for this research were collected between April 2021 and August 2022 by distributing the survey form's Google Forms link to universities through official letters from the rectors. The data collection process involved capturing information on sociodemographic characteristics, characteristics related to the Covid-19 pandemic, as well as responses to two specific scales: the "Attitudes Toward Aging and the Elderly Scale" and the "Evaluation Scale for Perceptions and Attitudes Toward the Covid-19 Pandemic."

The Attitude Scale Toward Aging and Elderliness (ASTAE)

Was utilized to assess attitudes towards aging and the elderly. The scale, previously established for its reliability and validity in the Turkish context by Otrar (2016), consists of four sub-dimensions. It includes a total of 45 items: 12 items on "difficulty accepting aging" (items 1, 5, 9, 10, 20, 21, 30, 33, 34, 38, 39, 42), 15 items on "perception of social deterioration" (items 2, 3, 6, 8, 13, 17, 18, 27, 28, 29, 37, 40, 43, 44, 45), 10 items on "difficulty coping with life" (items 4, 7, 11, 14, 22, 23, 24, 25, 36, 41), and 8 items on "negative image" (items 12, 15, 16, 19, 26, 31, 32, 35). The responses are rated on a 5-point Likert scale ranging from 1 ("strongly

disagree") to 5 ("strongly agree"). Reverse scoring is applied to items 30, 43, and 32, with higher scores indicating more negative attitudes. The scale's overall reliability coefficient (Cronbach's alpha) is α=0.97, and the sub-dimensions range from α=0.90 to 0.97. The minimum possible score on the scale is 45, while the maximum is 225. Higher total scores generally indicate more negative attitudes towards aging, while lower scores indicate more positive attitudes and perceptions. A score close to 225 suggests a negative attitude towards aging and the elderly, whereas a score close to 45 reflects a positive attitude (Otrar, 2016). In this study, the scale was evaluated based on the total score. The reliability coefficient for this study was α=0.95, and the sub-dimensions ranged from α=0.78 to 0.89. The Cronbach's Alpha values for the sub-dimensions were as follows: difficulty accepting aging (α=0.86), perception of social deterioration (α=0.88), difficulty coping with life (α=0.89), and negative image (α=0.78). Cronbach's Alpha values exceeding 0.60 indicate good internal consistency and reliability of the scale used in the study.

Perception and Attitudes Towards the Covid-19 Pandemic Scale (PATCP)

The PATCP scale, developed by Artan et al. (2020), was employed to assess individuals' perceptions and attitudes towards the Covid-19 pandemic. It comprises four sub-dimensions: general perception, attributional perception, control perception, and avoidance behaviors. Each sub-dimension is evaluated independently, generating separate scores. The Cronbach's Alpha values for each sub-dimension were determined to be 0.650, 0.847, 0.780, and 0.849, respectively. The sub-dimensions of the scale are also considered and evaluated separately. The General Perception sub-dimension encompasses infectivity and danger, yielding a two-dimensional assessment. It consists of 8 items covering infectivity (items 6, 7, 8) and danger (items 1, 2, 3, 4, 5). The Attributional Perception sub-dimension, the second sub-scale with 18 items, evaluates the factors contributing to the disease. It includes sub-dimensions such as conspiracy (items 9, 10, 11, 13, 12, 14), environmental (items 15, 16, 17, 18, 19, 20, 21, 22), and belief (items 23, 24, 25, 26). The Control Perception sub-dimension comprises 13 items and encompasses sub-dimensions such as macro control (items 27, 28, 29), personal control (items 30, 31, 32, 33, 34, 35), and inevitability (items 36, 37, 38, 39). Lastly, the Avoidance Behaviors sub-dimension assesses avoidance behaviors and comprises 14 items rated on a 5-point Likert scale ranging from "Never done this behavior" to "Done this behavior very often". The sub-dimensions of this scale are cognitive avoidance (items 1, 2, 3, 4, 5, 6, 7), avoidance of public places (items 8, 9, 10, 11), and avoidance of personal contact (items 12, 13, 14). Higher scores in each scale indicate stronger beliefs within that specific domain. Scores are obtained separately for each independently evaluated scale, ranging from a minimum of 1 to a maximum of 5 (Artan et al., 2020). The reliability coefficient for this study was α=0.85, and the sub-dimensions ranged from α=0.67 to 0.89. The Cronbach's Alpha values for the sub-dimensions were as follows: disease perception (α=0.67), attributional perception (α=0.89), control perception (α=0.76), and avoidance behaviors (α=0.86). Cronbach's Alpha values exceeding 0.60 indicate the reliability of the scales used and suggest good internal consistency within the employed scale.

Data Analysis Method

The data collected for the research were analyzed using the SPSS (Statistical Package for Social Sciences) software for Windows, version 25.0. Descriptive statistical methods, including frequency, percentage, mean, and standard deviation, were employed to evaluate the data. Pearson correlation analysis was used to examine the relationships between numerical variables. The reliability of the scales used was tested using Cronbach's Alpha coefficient. The normality of the data was assessed through normality tests.

Ethics

Ethical approval for the research was obtained from the Clinical Research Ethics Committee of Çanakkale Onsekiz Mart University (approval number: 2021-YÖNP-0185). The study also received approval from the Ministry of Health (2021-04-04T23_27_25). Permissions for the usage of scales and participants' consent were obtained, and an approval letter was included in the Google Forms survey.

Results

Descriptive Statistics

An examination of the age distribution of academicians reveals that the largest proportion, 44.4%, falls within the age range of 65-69 years. In terms of gender, the majority, 68.4%, are males. When considering the distribution of academic titles, 66.3% hold the title of professor. The marital status of the participants indicates that 80.7% are married, and 88.8% have children. In terms of living arrangements, 78.1% reported living with their spouses. Regarding years of service, 32.1% have worked for 45-49 years, and 29.9% have worked for 50 years or more. Additionally, when examining the distribution of participants based on their years of academic experience, 42.2% have worked for 39 years or less, 24.6% for 40-44 years, 20.9% for 45-49 years, and 12.3% for 50 years or more (Table 1).

Table 1

Descriptive Characteristics (n=187)

Variables		Frequency	Percentage
Age	65-69	83	44.4
($\bar{X}$±SS, 71.08±4.18)	70-74	61	32.6
	75 years and older	43	23.0
Gender	Female	59	31.6
	Male	128	68.4
Position	Research Assistant	19	10.2
	Assistant Professor	30	16.0
	Associate Professor	14	7.5
	Professor	124	66.3
Marital Status	Married	151	80.7

Variables		Frequency	Percentage
	Single/Divorced	36	19.3
Child	Yes	166	88.8
	No	21	11.2
The person experiencing	Alone	32	17.1
Years of service	Spouse	146	78.1
	Other (Parents/Children/Relatives)	9	4.8
Years in academia	39 years and younger	28	15.0
(Mean±SD, 45.01±7.80)	40-44 years	43	23.0
	45-49 years	60	32.1
	50 years and older	56	29.9
The person experiencing	39 years and younger	79	42.2
	40-44 years	46	24.6
	45-49 years	39	20.9
	50 years and older	23	12.3

A total of 42.2% (n=79) of academicians reported having chronic illnesses, while 28.9% (n=54) had contracted Covid-19, and 14.4% (n=27) had received treatment for Covid-19. Additionally, it was found that 96.8% (n=181) of participants did not visit the hospital for Covid-19, and 19.3% (n=36) received support during the Covid-19 period. In terms of the impact of Covid-19 restrictions, 50.8% (n=95) reported being negatively affected, while 39% (n=73) stated that they were not affected. When examining the effect on scientific studies, 49.7% (n=93) reported that their studies were not affected, while 31.6% (n=59) indicated that their studies were disrupted. Moreover, 49.7% (n=93) of participants expressed discomfort with the equating of chronic age with old age, while 50.3% (n=94) stated that they were not bothered by it (Table 2).

Table 2

Descriptive Characteristics of academics regarding the Covid-19 pandemic (n=187)

Variables		Frequency	Percentage
Presence of chronic illness	Yes	79	42.2
	No	108	57.8
Experience of Covid-19	Yes	54	28.9
	No	133	71.1
Receiving treatment for Covid-19	Yes	27	14.4
	No	160	85.6
Visiting the hospital for Covid-19	Yes	6	3.2
	No	181	96.8
Availability of support during Covid-19	Yes	36	19.3
	No	151	80.7
Impact of Covid-19 restrictions	Positive	19	10.2
	Negative	95	50.8
	Not affected	73	39.0
Impact on scientific studies	Did not affect my work	93	49.7
	I could work more effectively	35	18.7

Variables		Frequency	Percentage
	My work was disrupted	59	31.6
Discomfort with the equivalence of chronological age and aging	Yes	93	49.7
	No	94	50.3

Results of Scales

When examining the descriptive statistics of the Ageism Attitude Scale, the mean score was found to be 105.76 ± 28.55. The sub-dimension of social depreciation perception had the highest average score (34.82 ± 9.55) (Table 3).

Table 3

Descriptive statistics of the ASTAE and its dimensions used in the study

Scale and Subdimensions	Min	Max	Mean±SD
Difficulty Accepting Aging	12.00	54.00	27.63±8.35
Perception of Social Detachment	15.00	63.00	34.82±9.55
Difficulty Coping with Life	10.00	50.00	25.68±7.77
Negative Image	8.00	32.00	17.63±5.20
Total	45.00	199.00	105.76±28.55

Upon examination of the descriptive statistics of the Covid-19 Perception and Attitudes Assessment Scale (CPAAS), it was determined that the mean score was 2.55 ± 0.39. Notably, the highest average scores were observed in the sub-dimensions of disease perception (3.01 ± 0.6) and control perception (2.80 ± 0.56) (Table 4).

Table 4

Descriptive statistics of the PATCP and its subscales used in the study

Scale and Subdimensions	Min	Max	Mean±SD
Disease Perception	1.00	4.50	3.01±0.60
Causal Attribution Perception	1.00	3.56	2.17±0.65
Control Perception	1.31	4.00	2.80±0.56
Avoidance Behaviors	1.00	4.29	2.54±0.74
Total	1.49	3.43	2.55±0.39

Results of Hypothesis Testing

The statistical analysis revealed significant and positive correlations between several variables. There was a statistically significant positive correlation between the difficulty in accepting aging and avoidance behaviors ($r=0.258$, $p<0.05$), as well as between the Covid-19 Perception and Attitudes Assessment Scale (KSATÖ) ($r=0.187$, $p<0.05$), supporting the hypothesis.

A significant positive correlation was found between social stigma perception and perception of reasons ($r=0.146$, $p<0.05$), avoidance behaviors ($r=0.203$, $p<0.05$), and KSATÖ ($r=0.211$, $p<0.05$). There was also a statistically significant positive correlation between coping difficulty and avoidance behaviors ($r=0.259$, $p<0.05$), as well as KSATÖ ($r=0.164$, $p<0.05$). Furthermore, a significant positive correlation was observed between negative image and avoidance behaviors ($r=0.174$, $p<0.05$), as well as KSATÖ ($r=0.201$, $p<0.05$). Lastly, there was a statistically significant positive correlation between the Attitudes Toward Aging Scale (YYTÖ) and avoidance behaviors ($r=0.246$, $p<0.05$), as well as KSATÖ ($r=0.207$, $p<0.05$) (Table 5).

Table 5

The Relationship Between Perception and Attitude Towards Covid-19 Pandemic and Aging Perception Among Academics

Scale and Subdimensions		**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**
1- Difficulty Accepting Aging	r	1.000	0.809	0.766	0.728	0.904	0.088	0.067	-0.009	0.258	0.187
	p	-	0.000*	0.000*	0.000*	0.000*	0.229	0.359	0.897	0.000*	0.010*
2- Perception of Social Erosion	r		1.000	0.853	0.862	0.961	0.087	0.146	0.011	0.203	0.211
	p		-	0.000*	0.000*	0.000*	0.237	0.046*	0.883	0.005*	0.004*
3- Coping with Life Difficulty	r			1.000	0.772	0.923	0.080	0.043	-0.031	0.259	0.164
	p			-	0.000*	0.000*	0.277	0.559	0.670	0.000*	0.025*
4- Negative Image	r				1.000	0.894	0.101	0.124	0.052	0.174	0.201
	p				-	0.000*	0.168	0.092	0.479	0.017*	0.006*
5- Aging Perception Scale (APS)	r					1.000	0.095	0.103	0.002	0.246	0.207
	p					-	0.195	0.161	0.980	0.001*	0.005*

Scale and Subdimensions		1	2	3	4	5	6	7	8	9	10
6- Perception of Illness	r						1.000	0.082	0.273	0.010	0.385
	p						-	0.265	0.000*	0.889	0.000*
7- Perception of Causes	r							1.000	0.347	0.004	0.716
	p							-	0.000*	0.958	0.000*
8- Perception of Control	r								1.000	0.055	0.647
	p								-	0.454	0.000*
9- Avoidance Behaviors	r									1.000	0.532
	p									-	0.000*
10- Aging Attitude Scale (AAS)	r										1.000
	p										-

Discussion

According to the findings of this study, it was discovered that approximately half of the academicians surveyed had a chronic illness, while one-third had contracted Covid-19. The majority of participants reported negative impacts from the pandemic restrictions, with around one-third experiencing disruptions in their scientific studies. Additionally, half of the participants expressed discomfort with the association of chronological age with old age. During the pandemic, the majority of academicians lacked social support and did not visit hospitals, although a small proportion received treatment (Table 2). Elderly individuals were identified as one of the most vulnerable groups during the pandemic (Gimeno et al., 2021). The presence of chronic illnesses has been found to increase the risk of Covid-19 mortality (Dadras et al., 2022), and it has been observed that 46% of individuals over 65 years old have more than one chronic illness (TÜSEB, 2021). Chronic illnesses significantly affect individuals' overall health and can hinder their daily activities (Maresova et al., 2019). In a study conducted with elderly individuals in Kayseri by Avşar Arık (2022), it was concluded that although participants acknowledged the association of age with old age, they did not personally feel old or perceive themselves as such due to their inner energy. Feeling vigorous and healthy prevented them from identifying themselves as elderly, and they believed that being unhealthy is not necessarily linked to age. However, societal perceptions often equate chronological aging with old age (Avşar Arık, 2022). The impact of the pandemic on elderly individuals varies depending on their individual characteristics. While some elderly individuals experienced negative effects due to increased health issues and the inability to attend medical check-ups, intellectually active seniors expressed satisfaction, stating that they were able to pursue

personal development opportunities despite the circumstances (Ercan & Arıcı, 2020). The support received during the pandemic played a crucial role in mitigating the negative effects. Elderly individuals who experienced social isolation received support from their families and partners, while those living alone were aided by public institutions (İnce, 2020). In a study by Kahraman et al. (2022), it was found that half of the elderly participants received support, while the other half did not, with lack of support attributed to factors such as distance from family and travel restrictions. Technological resources were utilized to maintain communication with loved ones during this period. Heid et al. (2021) identified eight areas in which elderly individuals experienced changes and problems during the pandemic, including home care, socialization and activity restrictions, mental and physical health, economic status, environment, and the concept of death. Erdoğan (2022) found that academics were significantly impacted by the pandemic, facing difficulties in conducting scientific research. More than half of the academics struggled to maintain their pre-pandemic levels of productivity, and three-quarters were unable to engage in academic work and reading as desired. Similar studies by Güven (2021) and Şamiloğlu (2022) confirmed the negative effects of the pandemic on academics, including decreased motivation, increased stress and anxiety, and disruptions in work. While remote work had its challenges for academics with family responsibilities, it also reduced stress related to the physical work environment for some individuals (Öksüz Gül et al., 2022).

In this study, the researchers assessed the attitudes of participating academics towards aging and old age using the YYTÖ (Attitude Towards Aging Scale). The average score obtained by the academics was determined to be 105.76±28.55 (Table 3). Scores close to 225 indicate a negative attitude towards aging and old age, while scores near 45 reflect a positive attitude. The average score obtained in this study falls within the moderate range. Similar findings have been reported in other studies, indicating that the attitudes of both elderly and middle-aged individuals towards aging tend to be moderate (Top & Dikmetaş, 2015; Atay & Kumcağız, 2022). Perceptions of old age can vary among individuals and societies, influenced by accumulated experiences and personal circumstances (Yun & Lachman, 2006; Duvan & Davran, 2022). How individuals perceive old age is an important aspect related to their current health status. Studies have shown that self-acceptance contributes to increased lifespan, and elderly individuals reporting better health tend to have lower levels of depression and anxiety, leading to more positive perceptions and attitudes towards aging (Ng et al., 2020; Bryant et al., 2012). In studies conducted with elderly individuals, a high level of positive attitude towards the aging period has been observed (Akbayrak & Aysan, 2022; Alaca et al., 2022). It has also been found that individuals who feel they have accomplished things in their lives and have a sense of completeness in old age are more likely to accept themselves as elderly (Çetin, 2019). On the other hand, negative perceptions of aging are commonly observed among the elderly, especially among those at advanced ages (Duvan & Davran, 2022; Çakmak & Kaşlı, 2022). These negative perceptions are associated with life satisfaction and the experience of successful aging (Kunuroğlu & Vural, 2021). Social media discourse analysis has revealed that aging is often described using negative expressions (Cerrah & Baran, 2020). The modernization of societies, changes in family structures, and demographic shifts have led to the marginalization of the elderly, contributing to negative societal attitudes towards aging (Ünal, 2019). Cultural factors also play a role in shaping perceptions of aging, as seen in a study comparing elderly

individuals from different cultures (Akülkü, 2015). Furthermore, societal perceptions and attitudes towards the elderly are influenced by individuals' own negative self-perceptions (Uysal, 2020). The COVID-19 pandemic has further influenced perceptions and attitudes towards the elderly. While there has been an increased societal appreciation for the elderly during the pandemic, the isolation experienced by the elderly has also led to stigmatization and negative reactions (Özdemir, 2020; Yaşar & Avcı, 2020). The study suggests that non-retired academics who are still actively working may find it difficult to accept old age, considering their ongoing plans and the societal view of the elderly as a problem (Özbolat, 2016). Social engagement has been found to be associated with a more positive attitude towards aging (Aközer et al., 2011).

In this study conducted during the pandemic, the higher level of difficulty in accepting aging among academic elderly individuals compared to other subgroups is attributed to the practices that have led to their separation from social life. Psychological well-being has been found to facilitate the acceptance of old age (Atay & Kumcağız, 2022).

In this study, the researchers assessed the attitudes of academic participants towards the COVID-19 pandemic using the KSATÖ scale. The average score obtained by the academics was determined to be 2.55 ± 0.39 (min: 1 - max: 5), indicating a moderate level of belief in the field related to the pandemic (Table 4). The scores obtained from the subscales of the scale were ranked in descending order as perception of illness, perception of control, avoidance, and perception of causes. Since there is no cutoff point for the scale, this score represents an average value. Previous studies have shown that elderly individuals initially viewed general prohibitions imposed at the beginning of the pandemic positively. However, when restrictions were relaxed and only those aged 65 and over were subjected to limitations, elderly individuals started to feel as if aging was seen as a "fault," leading to negative emotions due to age discrimination. This discrimination caused some elderly individuals to experience negative emotions (Doğanay & Çopur, 2020). Another study revealed that the majority of elderly individuals demonstrated fatalistic attitudes towards COVID-19. They complied with the rules, did not feel excluded during the pandemic, and some justified certain behaviors towards the elderly while others did not (Kahraman et al., 2022).

In a study conducted by Ferdous et al. (2020), it was found that certain individual characteristics, including being an elderly individual, were associated with having a more positive attitude towards taking protective measures. Furthermore, in a study involving academics who were moderately affected by COVID-19, it was concluded that they were most compliant with wearing gloves and masks (Şamiloğlu, 2022). These academics believed that the measures taken in Turkey were appropriate and correct, and they themselves actively practiced these measures (Çınar & Küçükali, 2020). In another study conducted by Durak and and Kesgin (2021), it was found that individuals aged 65 and over were aware of being at risk and had general knowledge about COVID-19. Elderly individuals also paid attention to personal hygiene and were aware of the importance of isolation rules, applying them. Despite facing social restrictions and difficulties in going out, elderly individuals demonstrated cautious and determined behavior. Academics in the study by Çınar and Küçükali (2020) also perceived the pandemic as a serious situation. They responded with a low average to the notion that COVID-19 could be an experiment and with a moderate level of agreement to the idea that the pandemic could be a biological attack.

The Relationship Between Academics' Perception and Attitude Towards the COVID-19 Pandemic and Perception of Aging and Old Age

In this study, a statistically significant positive relationship was found between the perception and attitude towards the COVID-19 pandemic and the perception of aging and old age among academics aged 65 and over ($p<0.05$) (Table 5). As the attitude scores towards aging and old age increased, the perception and attitude scores towards the COVID-19 pandemic also increased. The increase in scores indicates a high belief in the COVID-19 pandemic in that area, while the increase in scores obtained from the perception of aging and old age scale indicates a negative attitude. In other words, higher average scores indicate an increasing belief among the elderly in their general perception, attribution, control, and avoidance behaviors towards COVID-19. However, an increase in the belief in illness corresponds to a more negative perception of aging. No national or international studies directly related to the research outcome were found, so the results were discussed in light of the relevant literature.

Previous studies have shown that younger individuals who were aware of the seriousness of COVID-19 but did not consider themselves at risk did not take the pandemic seriously enough (Kaplan et al., 2020; Zhong et al., 2021). The perception of risk significantly amplifies negative emotions in individuals, leading the elderly to anticipate that the situation will persist longer and instilling a sense of hopelessness about the pandemic (Gerhold, 2020; Ceccato et al., 2021). Stigmatization directed towards the elderly during the pandemic has led to feelings of physical constraint and a sense of aging among approximately half of the elderly, as well as increased physical difficulties and a sense of being unwanted in society (Çetin, 2019; Özyer Aksaray, 2022; Verhage et al., 2021). However, despite these challenges, elderly individuals have demonstrated a more positive attitude towards restrictions and have shown greater compliance with imposed rules (Ceccato et al., 2021).

Studies have also revealed the emergence of a perception among the elderly that aging is a crime, leading to a decrease in their quality of life, feelings of helplessness and weakness, and a sense of unfairness regarding imposed quarantine measures (Yıldırım, 2022). The perception of aging varies depending on factors such as social status, educational level, geographic location, and economic status, with intellectually inclined individuals tending to have more positive perceptions of aging (Doğanay & Çopur, 2020; Çetin, 2019). Some elderly individuals distance themselves from negative definitions of aging and identify as "ageless elderly," who are technologically adept, self-improving, and socially active intellectual beings (Ersözlü & Aydemir, 2021). Increased social participation has been found to influence perceptions of aging, with individuals perceiving their own age as more advanced (Liu et al., 2020). Engaging in work life provides physical and mental activity for elderly individuals, contributing to positive perceptions of aging and healthy aging (Akbayrak & Aysan, 2022).

Academicians, as an important professional group, have reported experiencing various psychological, physiological, and social adversities during the COVID-19 pandemic, including anxiety, fear, difficulty adapting to changing conditions, and insomnia. They have also perceived differences in social life, self-improvement, and the meaning of life (Türkkan et al., 2021). The high confidence instilled in elderly academicians regarding the pandemic could indirectly be associated with the formation of negative attitudes towards aging. While academicians continue to be productive and active in their work lives, their risky situation due

to their chronological age and the stigma they face may influence their beliefs about illness. Therefore, although a relationship between these two concepts is demonstrated, it is important to consider the design of the discussion in determining which one is the cause and which one is the effect.

Conclusion and Recommendations

The findings of this study reveal important insights regarding elderly academics' experiences during the COVID-19 pandemic. Approximately half of the participants reported having a chronic illness, and one-third had contracted COVID-19. The restrictions imposed during the pandemic negatively affected half of the academics, with nearly half experiencing negative impacts on their scientific work. Additionally, they expressed discomfort with equating chronological age with old age. Alarmingly, eight out of ten academics did not receive support during the pandemic, and only a small percentage received treatment despite the majority seeking medical attention. Based on the scale scores, it was determined that the perception of old age and attitudes towards COVID-19 among the participating academics were average. Furthermore, a statistically significant positive relationship was identified ($p < 0.05$) between the perception of aging and old age and the perception and attitude towards the COVID-19 pandemic among academics aged 65 and over. In light of these findings, several recommendations can be made to address the challenges faced by elderly academics during the pandemic. It is crucial to develop plans and interventions aimed at positively changing perceptions of aging and the pandemic among academics. Public health nurses and other relevant stakeholders can play a vital role in advocating for and promoting alternative approaches to perceiving aging, moving away from a purely chronological perspective. Efforts should be made to ensure the effective continuation of education for academics who are chronologically elderly during pandemic periods, recognizing their knowledge and expertise. Moreover, it is recommended that future studies employ mixed or qualitative research methods to gain a deeper understanding of the thoughts, experiences, and needs of academics during this challenging period. These studies can provide valuable insights that go beyond quantitative measures and capture the nuances and complexities of their experiences. By implementing these recommendations, policymakers, healthcare professionals, and educational institutions can better support elderly academics, improve their well-being, and enhance their contributions to society. In this study, the results have not been analyzed from a gender perspective, which can be considered a limitation of the study. Therefore, future researchers addressing this topic are advised to explore gender-related aspects in their investigations.

References

Akbayrak, E., & Aysan, Ü. (2022). Successful aging in place from the perspective of the elderly. *Journal of Social Policy Studies*, *22*(55), 399-427. https://doi.org/10.21560/spcd.vi.1053840

Aközer, M., Nuhrat, C., & Say, Ş. (2011). Expectations regarding old age in Türkiye. *Journal of Social Policy Studies*, *27*(27), 103-128. https://doi.org/10.21560/spcd.73482

Aktaş, G. (2022). Sociological aspects of the epidemic in the axis of "experienced generations": The case of Denizli. *Hacettepe University Journal of Faculty of Letters*, *39*(1), 1-26. https://doi.org/10.32600/huefd.923390

Akülkü, H. (2015). The elderly perception of old people: The case of Antalya/Finike and Polonya/Rzeszow (Master's thesis). *Abant İzzet Baysal University, Social Sciences Institute, Bolu*. Retrieved from https://acikbilim.yok.gov.tr/handle/20.500.12812/584300

Alaca, Ç., Şahin, M., & Beler, M. (2022). The relation of life quality and depression with perception of age in Fethiye nursing. *Journal of Turkish Nurses Association*, *3*(1), 17-28. Retrieved from https://dergipark.org.tr/en/pub/thdd/issue/70212/1019609

Alparslan, A. M., Polatcı, S., & Yastıoğlu, S. (2021). Alienation to academicianship during the COVID-19 pandemic. *Journal of Economics and Administrative Sciences Faculty*, *8*(1), 312-338. https://doi.org/10.30798/makuiibf.805133

Artan, T., Karaman, M., Arslan, İ., & Cebeci, F. (2020). Evaluation of the scale for assessing perceptions and attitudes towards the COVID-19 outbreak. *Turkish Journal of Social Work, 4*(2), 101-107. Retrieved from https://dergipark.org.tr/en/pub/scd/issue/58064/820242

Atay, M. R., & Kumcağız, H. (2022). The relationship between psychological well-being and the difficulty of accepting old age in middle-aged individuals. *Journal of Erciyes Akademi*, *36*(2), 920-937. https://doi.org/10.48070/erciyesakademi.1117868

Avşar Arık, İ. (2022). *Urban aging in Central Anatolia: The example of Kayseri* (Unpublished doctoral dissertation). Necmettin Erbakan University, Social Sciences Institute, Konya. https://hdl.handle.net/20.500.12452/8235

Ayhan Balık, C. H., & Bilgin, H. (2022). Vulnerable groups during the pandemic process. In L. Küçük (Ed.), *Reflections of the pandemic on mental health* (pp. 1-10). Türkiye Klinikleri: Ankara. https://www.turkiyeklinikleri.com/article/en-pandemi-surecinde-kirilgan-gruplar-99352.html

Başaran, Ö. Ü. E. (2021). The elderly as a group that has been "marginalized" during the pandemic process. In XI. *Umteb International Congress on Vocational and Technical Sciences*, Ankara, 86-91. https://www.researchgate.net/publication/354804837

Biswas, M., Rahaman, S., Biswas, T. K., Haque, Z., & İbrahim, B. (2021). Association of gender, age and comorbidities with mortality in COVID-19 patients: A systematic review and meta-analysis. *Intervirology, 64*(1), 36-47. https://doi.org/10.1159/000512592

Bryant, C., Bei, B., Gilson, K., Komiti, A., Jackson, H., & Judd, F. (2012). The relationship between attitudes towards aging and physical and mental health in older adults. *International Psychogeriatrics*, *24*(10), 1674-1683. https://doi.org/10.1017/S1041610212000774

Ceccato, I., Palumbo, R., Di Crosta, A., La Malva, P., Marchetti, D., Maiella, R., & Di Domenico, A. (2021). Age-related differences in perception of the COVID-19 emergency

during the Italian epidemic. *Aging and Mental Healt*h, *25*(7), 1305-1313. https://doi.org/10.1080/13607863.2020.1856781

Cerrah, L. C., & Baran, M. (2020). Elderly and aging perception in participant glossary. Oltu *Journal of the Faculty of Humanities and Social Sciences*, *1*(1), 99-126. Retrieved from https://dergipark.org.tr/en/pub/oltu/issue/56350/763008

Chang, E. S., Kannoth, S., Levy, S., Wang, S. Y., Lee, J. E., & Levy, B. R. (2020). The global reach of age discrimination on the health of the elderly: A systematic review. *PLOS ONE*, *15*(1), e0220857. https://doi.org/10.1371/journal.pone.0220857

Çakmak, H. S., & Kaşlı, K. (2022). Evaluation of perceptions of aging of the elderly living in a district. *Abant Medical Journal*, *11*(1), 52-60. https://doi.org/10.47493/abantmedj.954826

Çetin, S. (2019). *The quality of life in elderly population and the role of social services in self-perceptions of aging: The case of Ankara* (Master's thesis). Sakarya University, Graduate School of Education, Sakarya. Retrieved from https://www.proquest.com/dissertations-theses/yaşlılarda-yaşam-kalitesi-ve-yaşlılık-algısında/docview/2689288788/se-2?accountid=15331

Çınar, O., & Küçükali, A. (2020). COVID-19 perception of academicians. Atatürk University *Journal of Graduate School of Social Sciences*, *24*(4), 1633-1654. Retrieved from https://dergipark.org.tr/en/pub/ataunisosbil/issue/59389/808013

Çiçek, N., & Mercan, B. A. (2020). *The effects of the COVID-19 pandemic on the perception of old age and the elderly in Turkey and public policy recommendations to improve the social image of the elderly*. TÜBİTAK SOBAG Project, 01.12.2020, Ankara. Retrieved from https://www.tubitak.gov.tr/sites/default/files/Covid19veToplum/ozet-ozgecmis/23SUBAT/DSALONU/15.30-17.00/NazanCICEK_Ozet.pdf

Dadras, O., Seyed Alinaghi, S., Karimi, A., Shamsabadi, A., Qaderi, K., Ramezani, M., ... & Voltarelli, F. A. (2022). COVID-19 mortality and its predictors in the elderly: A systematic review. *Health Science Reports*, *5*(3), e657. https://doi.org/10.1002/hsr2.657

Dağlı, Y., & Boz, H. (2018). The evaluation of the senescence perceptions and the lifelong learning needs of elderly individuals. *Electronic Turkish Studies*, *13*(27), 499-530. http://dx.doi.org/10.7827/TurkishStudies.14409

Değirmenci, B. (2020). Examining the mediating effect of “distress tolerance’s" on the impact of COVID-19 perception on social anxiety. *Balkan and Near Eastern Journal of Social Sciences,* *6*(Special Issue), 83-93. Retrieved from https://www.ibaness.org/bnejss/2020_06_special_issue/13_Degirmenci.pdf

Dirini, İ., & Özsu, G. (2020). *Hate speech report on social media during the COVID-19 pandemic*. In Z. Özarslan (Ed.), Alternative Informatics Association. Ankara: Alternative Informatics Association. Retrieved from https://ekitap.alternatifbilisim.org/pdf/covid19-nefret-soylemi-raporu.pdf

Doğanay, G., & Çopur, Z. (2020). Views of the elderly population on the COVID-19 outbreak: The case of Giresun province. *Turkish Geographical Review*, 76, 59-74. https://doi.org/10.17211/tcd.796128

Durak, M. B., & Kesgin, S. S. (2021). Pandemic and demography: The perceptions and attitudes towards COVID-19 pandemic by age groups. *Journal of Social Change*, 3(1), 6-23. Retrieved from https://toplumsaldegisim.com/wp-content/uploads/2021/01/MAKALE_1.pdf

Duvan, E. K., & Davran, M. K. (2022). Aging perceptions of the elderly living in rural areas: The case of Osmaniye Province Kadirli District. *MAS Journal of Applied Sciences*, 7(3), 710-721. https://doi.org/10.5281/zenodo.6948730

Ercan, M., & Arıcı, A. (2020). Bio-psycho-social effects of COVID-19 pandemia process on elderly. *Journal of ADEM*, *1*(3), 5-22. Retrieved from https://dergipark.org.tr/en/pub/jadem/issue/60479/877468

Erdoğan, E. (2022). Those who forget working hours: The impact of the COVID-19 pandemic on academics in the field of political science and international relations. *Reflektif Journal of Social Sciences*, 3(1), 223-241. https://doi.org/10.47613/reflektif.2022.66

Ersözlü, M., & Aydemir, M. A. (2021). Permanent, continuous and interested: Ageless older adults. Senex: *Journal of Aging Studies*, 5(1), 19-46. Retrieved from https://dergipark.org.tr/en/pub/senex/issue/64836/992641

Escourrou, E., Laurent, S., Leroux, J., Oustric, S., & Gardette, V. (2022). The shift from old age to very old age: An analysis of the perception of aging among older people. *BMC Primary Care*, *23*(1), 1-10. Retrieved from https://link.springer.com/article/10.1186/s12875021-01616-4

Ferdous, M. Z., Islam, M. S., Sikder, M. T., Mosaddek, A. S. M., Zegarra Valdivia, J. A., & Gozal, D. (2020). Knowledge, attitudes and practice regarding the COVID-19 outbreak in Bangladesh: An online-based cross-sectional study. *PLOS ONE*, *15*(10). https://doi.org/10.1371/journal.pone.0239254

General Directorate of Public Health. (2020). Covid-19: General Information, Epidemiology and Diagnosis. Republic of Turkey Ministry of Health. https://covid19.saglik.gov.tr/TR-66337/genel-bilgiler-epidemiyoloji-ve-tani.html

Gerhold, L. (2020). COVID-19: Risk perception and coping strategies. https://doi.org/10.31234/osf.io/xmpk4

Gimeno Miguel, A., Bliek-Bueno, K., Poblador-Plou, B., Carmona-Pírez, J., Poncel-Falcó, A., & González-Rubio, F. (2021). Chronic diseases associated with increased likelihood of hospitalization and mortality in 68,913 COVID-19 confirmed cases in Spain: A population-based cohort study. *PLOS ONE, 16*(11). https://doi.org/10.1371/journal.pone.0259822

Güneş, G., & Çelebi, M. (2021). COVID-19 pandemic and elderly health. In M. Çöl (Ed.), *COVID-19 from a Public Health Perspective* (pp. 85-89). Turkiye Klinikleri: Ankara. https://abone.turkiyeklinikleri.com/index.php?lang=tr

Güven, A. (2021). An assessment of the quality of work life of academics in Turkey in the first year of the COVID-19 pandemic process. *Journal of Enderun*, *5*(1), 1-21. https://dergipark.org.tr/en/download/article-file/1637765

Heid, A. R., Cartwright, F., Wilson-Genderson, M., & Pruchno, R. (2021). Challenges experienced by older people during the initial months of the COVID-19 pandemic. *The Gerontologist*, *61*(1), 48–58. https://doi.org/10.1093/geront/gnaa138

İnce, C. (2020). The older people as a socially vulnerable group in disasters: The case of COVID-19. *Eurasian Journal of Researches in Social and Economics*, *7*(9), 184-198. Retrieved from https://dergipark.org.tr/en/pub/asead/issue/56911/791042

Johnson, R. B., & Christensen, L. (2020). *Educational research: Quantitative, qualitative, and mixed approaches* (7th ed.). Sage Publications.

Kaçan, H., Öztürk, A., & Değer, V. B. (2021). Do the anxiety of individuals affect their perceptions and attitudes towards the COVID-19 outbreak? *Current Approaches in Psychiatry*, *13*(Suppl 1), 405-420. https://doi.org/10.18863/pgy.1009613

Kahraman, B., Uğur, T. D., Girgin, D., & Koçak, A. B. (2022). Being old during COVID-19 era: Problems experienced by individuals aged 65 and over during the pandemic process. *Hacettepe University Journal of Faculty of Letters*, *39*(1), 124-143. https://doi.org/10.32600/huefd.988467

Kaplan, H., Sevinç, K., & İşbilen, N. (2020). Making sense of natural disasters and coping: A study on COVID-19 outbreak in Turkey. *Turkish Studies*, *15*(4), 579-597. https://doi.org/10.7827/TurkishStudies.44477

Kunuroğlu, F., & Vural Yüzbaşı, D. (2021). Factors promoting successful aging in Turkish older adults: Self-compassion, psychological resilience, and attitudes towards aging. *Journal of Happiness Studies, 22*(8), 3663-3678. https://doi.org/10.1007/s10902-021-00388-z

Liu, H., Wu, B., & Feng, Z. (2020). Social participation and self-perception of being old in China. *The International Journal of Aging and Human Development*, *91*(3), 219-234. https://doi.org/10.1177/0091415019875456

Losada-Baltar, A., Jiménez-Gonzalo, L., Gallego-Alberto, L., Pedroso-Chaparro, M. D. S., Fernandes-Pires, J., & Márquez-González, M. (2021). We are staying at home." Association of self-perceptions of aging, personal and family resources, and loneliness with psychological distress during the lock-down period of COVID-19. *The Journals of Gerontology: Series B*, *76*(2), e10–e16. https://doi.org/10.1093/geronb/gbaa048

Maresova, P., Javanmardi, E., Barakovic, S., Barakovic Husic, J., Tomsone, S., Krejcar, O., & Kuca, K. (2019). Consequences of chronic diseases and other limitations associated with old age: A scoping review. *BMC Public Health*, *19*(1), 1-17. https://doi.org/10.1186/s12889-019-7762-5

Ng, R., Allore, H. G., & Levy, B. R. (2020). Self-acceptance and interdependence promote longevity: Evidence from a 20-year prospective cohort study. *International Journal of Environmental Research and Public Health, 17*(16), 5980. https://doi.org/10.3390/ijerph17165980

Otrar, M. (2016). An attitude scale toward aging and elderliness: A validity and reliability study. *Turkish Journal of Sociology, 36*, 527-550. Retrieved from https://dergipark.org.tr/en/pub/iusosyoloji/issue/35801/401040

Öksüz Gül, F., Parlak, S., & Çelebi Çakıroğlu, O. (2022). Academic life experiences of early career female academics during the COVID-19 pandemic. *TÜBA-HER Higher Education Journal*, *12*(1), 143–152. https://doi.org/10.2399/yod.21.862284

Özbolat, A. (2016). From cradle to grave: The sociology of elderly and religion - The case of Adana. *Çukurova University Journal of Faculty of Divinity*, *16*(2), 53-76. Retrieved from https://dergipark.org.tr/en/pub/cuilah/issue/26944/283137

Özdemir, M. (2020). "The cultural change of the perception of elderliness during coronavirus outbreak". *Milli Folklor Journal, 16*(127), 46-58. Access: https://dergipark.org.tr/en/download/article-file/1212364

Özyer Aksaray, H. (2022). *The social construction of old age: Experiences, symbols, roles* (Unpublished doctoral thesis). Necmettin Erbakan University, Institute of Social Sciences, Konya. https://hdl.handle.net/20.500.12452/8531

Pan, A., Liu, L., Wang, C., Guo, H., Hao, X., Wang, Q., ... & Wu, T. (2020). Association of public health interventions with the epidemiology of the COVID-19 outbreak in Wuhan, China. *JAMA*, *323*(19), 1915-1923. https://doi.org/10.1001/jama.2020.6130

Skoog, I. (2020). COVID-19 and mental health among older people in Sweden. *International Psychogeriatrics, 32*(10), 1173-1175. https://doi.org/10.1017/S104161022000143X

Şamiloğlu, H. (2022). *Investigation of attitudes and perceptions of faculty members during the epidemic period: An application at Istanbul Esenyurt University* (Master's thesis). Esenyurt University Graduate School of Education, İstanbul. https://tez.yok.gov.tr/UlusalTezMerkezi/

Şenol, D., & Taştan, A. (2021). People 65 years and over of the COVID-19 (SARS-CoV-2) process: Understanding its impacts on a qualitative study for. *Habitus Journal of Sociology, 2*, 1-32. https://dergipark.org.tr/en/download/article-file/1474477

Taşdelen, B. (2020). A look at aging in the COVID-19 outbreak process: What do 280 characters say about the elderly? *Turkish Studies, 15*(6), 877-891. https://dx.doi.org/10.7827/TurkishStudies.44432

Tisminetzky, M., Delude, C., Hebert, T., Carr, C., Goldberg, R. J., & Gurwitz, J. H. (2022). Age, multiple chronic conditions, and COVID-19: A literature review. *The Journals of Gerontology: Series A, 77*(4), 872-878. https://doi.org/10.1093/gerona/glaa320

Top, M., & Dikmetaş, E. (2015). Quality of life and attitudes to ageing in Turkish older adults at old people's homes. *Health Expectations*, *18*, 288-300. https://doi.org/10.1111/hex.12032

Türk, A. (2020). Evaluation of applications and services for the elderly during the COVID-19 outbreak in Turkey. *Publication of Association of Social Workers,* 35-46. http://www.shuder.org/Resimler/1c6b97a6-bfa9-4888-b821-56d05c1916c8sosyal-hizmet-dergisi-2020-2pdf.pdf#page=35

Türkkan, T., Odacı, H., & Bülbül, K. (2022). The COVID-19 pandemic and academics: Psychological reflections and its impact on social life. *Gazi University Gazi Faculty of Education Journal, 42*(1), 85-121. https://doi.org/10.17152/gefad.988495

TUSEB. (2021). The Elderly Health Report: Current situation, problems, short and medium-term solutions (M. A. Karan & İ. Satman, Eds.). Turkish Health Institutes Presidency Türkiye Public Health and Chronic Diseases Institute: İstanbul. https://tuhke.tuseb.gov.tr/haberler/yasli-sagligi-raporu-guncel-durum-sorunlar-kisa-ve-orta-vadeli-cozumler-20221104

Uysal, T. M. (2020). Perception of aging of elderly individuals during social change period. *Turkish Studies-Social, 15*(6), 3161-3177. https://dx.doi.org/10.47356/TurkishStudies.44157

Ünal, V. (2019). Cases that change the thought of old age in the process of modernization: The elderly on the edge of social life. *Sivas Cumhuriyet University Faculty of Letters Journal of Social Sciences, 43*(2), 275-298. http://cujos.cumhuriyet.edu.tr/en/download/article-file/903139

Verhage, M., Thielman, L., de Kock, L., & Lindenberg, J. (2021). Coping of older adults in times of COVID-19: Considerations of temporality among Dutch older adults. *The Journals of Gerontology*, *76*(7), 290–299. https://doi.org/10.1093/geronb/gbab0088

World Health Organization (WHO). (2022). Health topics: Coronavirus disease (COVID-19). https://www.who.int/health-topics/coronavirus#tab=tab_1

Yaşar, Ö., & Avcı, N. (2020). Changing eldeliness perception: The elders stigmatized by COVID-19. *Electronic Turkish Studies, 15*(4). https://doi.org/10.7827/TurkishStudies.44275

Yıldırım, H. (2022). Psychosocial status of older adults aged 65 years and over during lockdown in Turkey and their perspectives on the outbreak. *Health and Social Care in the Community, 30*(3), 899-907. https://doi.org/10.1111/hsc.13542

Yun, R. J., & Lachman, M. E. (2006). Perceptions of aging in two cultures: Korean and American views on old age. *Journal of Cross-Cultural Gerontology,* 21(1), 55-70. https://link.springer.com/article/10.1007/s10823-006-9018-y

Zhong, Y., Liu, W., Lee, T. Y., Zhao, H., & Ji, J. (2021). Risk perception, knowledge, information sources, and emotional states among COVID-19 patients in Wuhan, China. *Nursing Outlook*, *69*(1), 13-21. https://doi.org/10.1016/j.outlook.2020.08.005

Zhou, F., Yu, T., Du, R., Fan, G., Liu, Y., Liu, Z., & Guan, L. (2020). Clinical course and risk factors for mortality of adult inpatients with COVID-19 in Wuhan, China: A retrospective cohort study. *The Lancet*, 395, 1054-1062. https://doi.org/10.1016/S0140-6736(20)305663