

Investigation of the Relationship Between Chronically Ill Geriatric Individuals' Adaptation to Illness and Their Attitudes Toward Aging in Place: A Cross-Sectional Study

Kronik Hastalığı Olan Geriatrik Bireylerin Hastalıklara Uyumları ile Yerinde Yaşlanmaya Yönelik Tutumları Arasındaki İlişkinin İncelenmesi: Kesitsel Bir Araştırma

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ABSTRACT Objective: The aim of this study was to investigate the relationship between the adaptation of chronically ill older adults to their chronic illness and their status of aging in place. **Material and Methods:** This descriptive and cross-sectional research was conducted at a state hospital from June 20, 2022, to October 20, 2022. Prior to the study, participants were administered a mini-mental test, and those who scored 24 or above were included in the study. The study was completed with 340 participants, in line with the power analysis. The research data were collected through a socio-demographic data form, an Aging in Place Scale, and a Chronic Illness Adaptation Assessment Scale. The research data were evaluated using the SPSS 24.0 program. **Results:** The average scores for participants' Chronic Illness Adaptation Assessment Scale were found to be 50.27±6.31, while the average scores for the Aging in Place Scale were 50.27±6.31. A statistically significant relationship was determined between the participants' age, marital status, duration of chronic illness, the presence of cohabitants, and their adaptation to chronic illness ($p<0.05$). A statistically significant positive relationship was identified between the participants' average scores on the Aging in Place Scale and their average scores on the Chronic Illness Adaptation Assessment Scale ($p<0.05$). **Conclusion:** This study determined that the adaptation of older adults to chronic illness is related to the duration of illness, the presence of cohabitants, age, and marital status. Positive attitudes of older people towards aging in place also increase their adaptation to chronic diseases.

ÖZET Amaç: Bu araştırma, kronik hastalığı olan yaşlı hastaların kronik hastalığa uyumları ve yerinde yaşlanma durumları arasındaki ilişkiyi incelemek amacıyla yapıldı. **Gereç ve Yöntemler:** Araştırma, tanımlayıcı ve kesitsel niteliktedir. Araştırma verileri 20.06.2022-20.10.2022 tarihleri arasında bir devlet hastanesinde toplandı. Araştırmaya mini mental testten 24 ve üzeri puan alan yaşlılar dâhil edildi. Araştırma 340 katılımcı ile tamamlandı. Araştırma verileri sosyodemografik soru formu, Kronik Hastalığa Uyum Ölçeği, Yerinde Yaşlanma Ölçeği ile toplandı. Araştırma verileri SPSS 24.0 programı kullanılarak değerlendirildi. **Bulgular:** Katılımcıların Kronik Hastalığa Uyum Ölçeği puan ortalamaları 50,27±6,31, Yerinde Yaşlanma Ölçeği puan ortalamaları 50,27±6,31 olarak belirlendi. Katılımcıların yaş, medeni durum, kronik hastalık süresi, birlikte yaşayanların varlığı değişkenleri ile Kronik Hastalığa Uyum Ölçeği puan ortalamaları arasında istatistiksel olarak anlamlı bir ilişki belirlendi ($p<0,05$). Yerinde Yaşlanma Ölçeği puan ortalaması ile Kronik Hastalığa Uyum Ölçeği puan ortalamaları arasında istatistiksel olarak pozitif yönde anlamlı bir ilişki belirlendi ($p<0,05$). **Sonuç:** Bu çalışmada, yaşlı erişkinlerde kronik hastalığa uyumun hastalık süresi, birlikte yaşayanlar, yaş ve medeni durum ile ilişkili olduğu belirlenmiştir. Yaşlı erişkinlerin yerinde yaşlanmaya yönelik olumlu tutumları, aynı zamanda onların kronik hastalıklara adaptasyonunu da artırır.

Keywords: Chronic illness; adaptation; older patient; aging in place

Anahtar Kelimeler: Kronik hastalık; adaptasyon; yaşlı hasta; yerinde yaşlanma

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Aging is associated with a decline in physiological functions, an increased risk of chronic diseases, and an overall reduction in an individual's capacity.^{1,2} Generally, from the age of 60 onwards, age becomes a significant factor among the main risks of disability and death. These risks include hearing, vision, and mobility losses, as well as non-communicable diseases such as heart disease, stroke, chronic respiratory disorders, cancer, and dementia.¹⁻³ The global increase in the older population and the decrease in physiological reserve capacity due to aging result in a high incidence of chronic diseases. The process of managing chronic diseases, which includes medication use, physician supervision, and lifestyle changes, particularly affects the level of adaptation of older people to the disease.⁴ The increasing care needs due to chronic diseases in older individuals are met by institutional care and home care services provided by the state. Additionally, older individuals commonly manage disease care processes at home, either alone or with family members.⁵

Aging in place is defined as the ability of a person to live safely, independently, and comfortably in their home and community, regardless of age, income, or ability level.^{6,7} Aging in place means that people continue to live in their homes and environments as long as they can and are interested. It shows that there are different motivations for aging in place, such as being autonomous, being independent to freely choose what to do at any time, being familiar with the environment, and being able to perform daily living activities.^{3,8} Older people prefer to age in their homes as long as possible. One of the most critical factors in aging at home is the compatibility between the person and the environment. Aging at home allows older adults to maintain, sustain, and develop their social and family networks.⁷ It is a concept that refers to meeting the needs of older individuals living independently at home by benefiting from care and support services.^{5,9} Participation in community and neighborhood life and social support are necessary for successful aging at home.¹⁰

The aging population tends to have a higher prevalence of chronic diseases worldwide today. The presence of multiple chronic conditions in the same person has profound effects on healthcare costs and

utilization.¹¹ Chronic diseases require a long treatment period, which leads to increased demand for and changes in the quality of healthcare services.⁴ Recognizing the needs of older people suffering from chronic diseases and other limitations can solve many problems they face and result in better quality of life, safety, and overall health. Moreover, investing in better quality of life, safety, and overall health in older people will increase their productivity and thus contribute to economic and social opportunities.¹²

No study has been found in the literature that examines the relationship between the adaptation of older adults with chronic diseases to their illness and their attitudes toward aging in place. Therefore, it is believed that this study, conducted to investigate the relationship between the adaptation of older individuals with chronic diseases to their illness and their attitudes toward aging in place, will contribute to the literature. In this regard, the aim was to examine the satisfaction of the older adults with chronic diseases with aging-in-place, their adaptation to chronic disease, and the relationship between these older people's satisfaction with aging-in-place and chronic disease adaptation.

MATERIAL AND METHODS

PARTICIPANTS AND STUDY DESIGN

The research was conducted descriptively, using data collected through face-to-face interviews with individuals aged 65 and over. These individuals applied to a state hospital for treatment and follow-up between 20.06.2022 and 20.10.2022. The research was completed with older patients admitted to internal medicine, cardiology and pulmonology departments.

The population of the study consisted of individuals aged 65 and over who applied to the hospital during the research period (n=1,180). The sample size was determined using the known population sampling method, with a 95% confidence interval and a 5% margin of error, resulting in a minimum of 296 participants. The study was completed with 340 participants who agreed to participate, were deemed to have no problems in their perception according to the mini-mental test results, and met the inclusion criteria for the study. The inclusion criteria for the study were being 65 years of age or older, scoring 24 or

higher on the mini-mental test, not having vision or hearing problems, not receiving institutional care services, voluntarily participating in the research, and having physical and cognitive health levels suitable for answering the planned forms in the study. The research was completed with 162 female participants and 178 male participants.

ETHIC

Ethics Committee Approval: Permission was obtained from the Osmaniye Korkut Ata University Science and Research Ethics Committee (date: April 25, 2022, no: 59754796-050.99-65602). Additionally, permission was obtained from the hospital (date: May 23, 2022, no: E.68568). Written and verbal consent from the participants was received. The research was completed in accordance with the principles of the Declaration of Helsinki.

Mini Mental Test: The Standardized Mini-Mental State Examination, developed by Folstein et al. in 1975, is a commonly used and easily applicable test for dementia screening.¹³ The validity and reliability of the test for the diagnosis of mild dementia in the Turkish population were established by Güngen et al.¹⁴ The mini-mental test consists of five main headings: orientation (10 points), registration memory (3 points), attention and calculation (5 points), recall (3 points), and language (9 points). The scale is evaluated out of a total of 30 points and has two different versions for educated and uneducated individuals. Traditionally, scores between 24 and 30 are considered normal. A score below 24 indicates cognitive impairment. Scores of 18-23 indicate mild dementia, 12-17 indicate moderate dementia, and below 12 indicate severe dementia.¹⁴

Questionnaire: A 14-question form that includes the socio-demographic characteristics of older individuals, information related to the disease, and characteristics of the place where they live.

Aging in Place Scale: Developed by Kalinkara and Kapıkıran, the Aging in Place Scale is intended to determine the satisfaction level of older individuals who have been living in the same environment for a long time, either in their current place or after a change of place. The scale consists of 15 statements and three subscales designed to measure the satisfac-

tion level of the older individual from their home and environment. In the scale, subscale 1 is "Perceived Social Support (questions 1-6)", subscale 2 is "Physical Competence (questions 7-11)", and subscale 3 is "Accessible Social Support (questions 12-15)". Attitudes related to the statements on the scale are determined by the responses given to 5-point Likert type sentences: "Strongly disagree" 1, "Disagree" 2, "Undecided" 3, "Agree" 4, and "Strongly agree" 5. The scale scores range from a minimum of 15 to a maximum of 75 points. Higher scores indicate increased satisfaction with aging in place.⁸ The Cronbach's alpha internal consistency value of the scale is reported as 0.85. In this study, Cronbach's alpha internal consistency value was determined as 0.88.

Chronic Disease Adaptation Assessment Scale: This scale consists of four subscales and 28 items, using a three-point Likert type format. The items of the scale include both positive and negative statements. The four subscales and 28 items of the scale are divided into Physiological Subscale with 4 items, Psychological Subscale with 16 items, Social Subscale with 5 items, and Spiritual (Religious) Subscale with 3 items. The lowest possible score on the scale is 28, and the highest is 84. As the score obtained from the scale increases, individuals' adaptation levels to chronic diseases also increase.¹⁵ The Cronbach's alpha value of the scale was found to be 0.83 for the total scale. In this study, Cronbach's alpha internal consistency value was found to be 0.87.

STATISTICAL ANALYSIS

The SPSS 24.0 (IBM, US) package program was used for the statistical analysis. In the evaluation of the research data, the number, percentage, and mean were used for the assessment of descriptive data. The homogeneity of the data was evaluated using the One Sample Kolmogorov-Smirnov test. In the relationship between the scale scores and descriptive variables, Student's t-test was used for two groups, One-Way Analysis of Variance and Kruskal-Wallis test were used for more than two groups, and Tukey post hoc test was employed. The relationship between the scale score averages was assessed using Pearson's correlation test.

RESULTS

The mean age of the participants was 70.25 ± 4.18 years. It was determined that 52.36% of the older participants in the study were male, 47.06% were in the 75-84 age group, 53.83% had chronic diseases for 11 years or more, and 34.70% had been living in their current homes for 20 years or more. A statistically significant relationship was found between the participants' age, marital status, employment status, type of chronic disease, duration of chronic disease, the region they lived in, and their chronic disease adaptation levels ($p < 0.05$) (Table 1).

The average score of the Aging in Place Scale for the participants was determined as 54.39 ± 9.94 . A statistically significant relationship was found between the participants' gender, age, education level variables and the average score of the Aging in Place Scale. Also, a statistically significant relationship was detected between the participants' living area, the individuals they live with, the duration of living in the area, and the average score of the Aging in Place Scale ($p < 0.05$) (Table 2).

A statistically significant positive relationship was determined between the participants' average scores for adaptation to chronic illness and their average scores on the Aging in Place Scale ($p < 0.05$) (Table 3).

DISCUSSION

The incidence of chronic diseases increases with the aging process.¹¹ If a chronic disease is poorly managed, the situation can worsen.¹⁶ With the adaptation to chronic diseases, a reduction in disease-related symptoms, a decrease in drug side effects, an increase in drug efficacy, and an improvement in quality of life are expected. However, there are physiological, psychological, and social reasons that affect medication adherence in the older adults along with the aging process.^{11,16} The importance of continuing the treatment process in the preferred environment of the older adults in achieving successful results in disease management in older adults is emphasized.^{2,9} In line with this, the relationship between the adaptation of older individuals with chronic diseases to chronic ill-

TABLE 1: Relationship between participants' sociodemographic characteristics and adaptation levels to chronic illness.

Characteristic	n (%)	$\bar{X} \pm SD$	p value
Gender			
Women	162 (47.64)	49.96 \pm 6.72	0.440
Men	178 (52.36)	50.56 \pm 5.93	
Age			
65-74	120 (35.29)	50.74 \pm 5.09	0.042
75-84	160 (47.06)	49.55 \pm 7.02	
85 and over	60 (17.65)	48.93 \pm 6.52	
Education status			
Literate	143 (42.05)	50.32 \pm 5.53	0.069
Illiterate	197 (57.95)	49.17 \pm 6.34	
Marital status			
Married	288 (84.70)	50.39 \pm 6.45	0.042
Not married	52 (15.30)	48.21 \pm 5.63	
Employment status			
Employed	219 (64.41)	48.93 \pm 6.62	0.038
Unemployed	121 (35.59)	50.66 \pm 6.18	
Chronic diseases			
Diabetes mellitus	86 (25.29)	49.55 \pm 7.30	0.027
Hypertension	74 (21.76)	49.80 \pm 6.11	
Dyslipidemia	35 (10.29)	50.66 \pm 3.20	
Thyroid	12 (3.52)	50.26 \pm 4.74	
Heart failure	40 (11.80)	53.43 \pm 3.55	
Renal insufficiency	11 (3.23)	53.50 \pm 6.86	
Connective tissue diseases	52 (15.29)	50.18 \pm 5.57	
Respiratory system diseases	30 (8.82)	50.38 \pm 4.82	
Duration of chronic disease			
0-5 years	49 (14.41)	51.31 \pm 4.61	0.046
6-10 years	108 (31.76)	50.86 \pm 5.99	
11 years and over	183 (53.83)	49.39 \pm 6.93	
Medications used			
Analgesic	110 (33.38)	50.12 \pm 5.67	0.092
Antihypertensive drugs	80 (23.50)	50.78 \pm 5.59	
Anticoagulant and antiaggregant	45 (11.81)	51.07 \pm 4.22	
Hormone replacement therapy	19 (5.28)	50.21 \pm 4.83	
Insulin and OAD	86 (26.11)	50.53 \pm 7.88	
Have you received training about your disease			
Yes	198 (58.23)	51.85 \pm 7.27	0.454
No	142 (41.77)	50.04 \pm 5.38	
Do you follow the nutritional recommendations regarding your disease			
Yes	95 (27.94)	52.21 \pm 6.61	0.041
A little	175 (51.47)	50.11 \pm 6.23	
No	70 (20.58)	47.84 \pm 5.75	
Do you follow exercise recommendations regarding your disease			
Yes	90 (26.47)	53.22 \pm 5.52	0.037
A little	178 (52.36)	51.44 \pm 5.87	
No	72 (21.17)	50.97 \pm 7.09	
Where do you live			
City center	197 (57.94)	52.21 \pm 6.23	0.042
Village	143 (42.06)	50.25 \pm 3.81	
Who do you live with			
Spouse	180 (52.94)	51.33 \pm 6.55	0.012
Spouse-children	108 (31.77)	51.80 \pm 6.46	
Alone	15 (4.41)	50.37 \pm 5.51	
with children	37 (10.88)	48.28 \pm 5.51	
How many years have you lived where you are			
1-5 years	35 (10.29)	51.18 \pm 4.56	0.638
6-10 years	50 (14.70)	51.88 \pm 7.24	
11-15 years	65 (19.14)	51.06 \pm 7.19	
16-20 years	72 (21.17)	51.72 \pm 5.71	
Over 20 years	118 (34.70)	52.72 \pm 5.63	
Chronic Disease Adaptation Assessment Scale			
Total score	340 (100)	50.27 \pm 6.31	

SD: Standard deviation.

TABLE 2: Relationship between participants' socio-demographic characteristics and attitude levels towards aging in place.

Characteristic	n (%)	$\bar{X}\pm SD$	p value
Gender			
Women	162 (47.64)	55.29±6.81	0.038
Men	178 (52.36)	52.71±7.08	
Age			
65-74	120 (35.29)	56.36±8.49	0.036
75-84	160 (47.06)	54.36±6.86	
85 and over	60 (17.65)	52.84±11.92	
Education status			
Literate	143 (42.05)	54.29±9.80	0.048
Illiterate	197 (57.95)	52.98±8.71	
Marital status			
Married	288 (84.70)	54.66±9.57	0.312
Not married	52 (15.30)	53.04±10.85	
Employment status			
Employed	219 (64.41)	54.73±9.27	0.767
Unemployed	121 (35.59)	53.25±11.89	
Chronic diseases			
Diabetes mellitus	86 (25.29)	55.70±8.05	
Hypertension	74 (21.76)	55.53±11.98	
Dyslipidemia	35 (10.29)	56.09±7.55	
Thyroid	12 (3.52)	56.03±7.44	
Heart failure	40 (11.80)	54.84±9.71	
Renal insufficiency	11 (3.23)	54.57±7.81	
Connective tissue diseases	52 (15.29)	55.71±8.10	
Respiratory system diseases	30 (8.82)	54.69±7.19	
Duration of chronic disease			
0-5 years	49 (14.41)	56.40±10.62	
6-10 years	108 (31.76)	56.53±8.56	
11 years and over	183 (53.83)	55.18±7.20	
Do you follow the nutritional recommendations regarding your disease			
Yes	95 (27.94)	55.11±7.78	
A little	175 (51.47)	54.69±11.41	
No	70 (20.58)	50.67±12.34	
Do you follow exercise recommendations regarding your disease			
Yes	90 (26.47)	56.89±8.33	
A little	178 (52.36)	55.02±8.32	
No	72 (21.17)	53.50±12.53	
Where do you live			
City center	197 (57.94)	52.72±10.27	
Village	143 (42.06)	53.64±12.15	
Who do you live with			
Spouse	180 (52.94)	54.48±10.41	
Spouse-children	108 (31.77)	55.20±8.14	
Alone	15 (4.41)	53.50±11.10	
With children	37 (10.88)	53.29±11.81	
How many years have you lived where you are			
1-5 years	35 (10.29)	54.58±10.13	
6-10 years	50 (14.70)	55.33±11.15	
11-15 years	65 (19.14)	56.05±6.59	
16-20 years	72 (21.17)	56.11±6.92	
Over 20 years	118 (34.70)	56.67±10.55	
Aging in Place Scale			
Total score	340 (100)	54.39±9.94	

SD: Standard deviation.

TABLE 3: Relationship between participants' adaptation to chronic illness and attitudes towards aging in place.

Scales	Aging-in-Place Scale
Chronic Disease Adjustment Scale	r=0.883 p=0.039

Spearman correlation analysis.

ness and their satisfaction with aging in place was examined in this study.

For the treatment of chronic diseases in older adults to be effective and for the disease process to progress positively, the patient needs to adhere to and commit to their treatment.^{11,17} In this study, the average scores for older adults' adaptation to chronic illness were determined to be at a moderate level of 50.27±6.31. The levels of adaptation to chronic illness among elderly patients in the 65-74 age group were statistically significantly higher than those aged 85 and over (p<0.05). Additionally, the average scores for adaptation to chronic diseases among non-working elderly individuals were found to be statistically significantly higher than those of working older individuals. Those with a chronic disease duration of 0-5 years had higher scores than those with a duration of 10 years and over, and married individuals had higher scores than unmarried individuals (p<0.05). In Chen et al. Chinese sample, the health status of older adults with chronic illness was determined to be at a moderate level and was found to be related to gender, education level, and marital status.¹⁸ In Kütmeç Yılmaz and Kara's study, the adaptation of older patients to chronic diseases was determined to be at a good level, and the average adaptation scores to chronic illness of married individuals and those with a lower average age were found to be higher.¹⁹ In another study with an average age of 65 and over, the participants' rate of adaptation to chronic illness was determined to be 55.5%.²⁰ The relationship findings between the sociodemographic characteristics and the adaptation levels to chronic illness of older adults obtained in this study are similar to the studies in the literature. Furthermore, in this study, older individuals living in rural areas, living with their spouse and children, and those who have been living in the same place for a long time were found to have higher adaptation levels to chronic ill-

ness. These findings are expected to contribute to the literature.

One of the main objectives of aging in place is to help individuals maintain their health as they age.²¹ However, there are limited studies in the literature that examine the relationship between older individuals' satisfaction with aging in place and their health and disease status. In this study, the average aging in place scores of older individuals with chronic diseases were determined to be at a moderate level of satisfaction with 54.39 ± 9.94 . The average aging in place scores of female participants with chronic diseases were statistically significantly higher than those of male participants ($p < 0.05$). At the same time, the average satisfaction scores of older individuals in the 65-74 age group with aging in place were statistically significantly higher than those of older individuals in the 85 and over age group. The average satisfaction scores of literate older individuals with aging in place were statistically significantly higher than those of illiterate older individuals ($p < 0.05$). In previous studies, older adults with an average age of 65-74 had higher aging in place scores than those aged 81 and over.^{9,21} In Tümer et al. study, the average Aging in Place Scale scores of older women were determined to be higher than those of male participants.²² Although there are few studies examining the relationship between older individuals' satisfaction with aging in place and their sociodemographic characteristics, the findings obtained from this study are consistent with the literature. It should be noted that in the country where the study was conducted, women's attachment to their homes is a social reality. Accordingly, the higher average satisfaction scores of older female participants with aging in place in this study may be due to this social reality. At the same time, in this study, the satisfaction levels of older individuals living with their spouses and children, those who have been living in their current homes for 11 years or longer, and those living in rural areas were found to be higher. These findings are expected to contribute to research related to the concept of aging in place.

The aging in place status of older individuals is related to their health status, depending on factors such as loneliness or living with family.^{23,24} In this

study, the adaptation levels of older individuals living with their spouses, children, and grandchildren to chronic diseases were determined to be high. One of the significant findings of the study is that as the satisfaction of older individuals with chronic diseases with aging in place increases, their adaptation levels to chronic diseases also increase at a statistically significant level ($p < 0.05$). Greenfield and Reyes' study states that the general well-being of older adults whose neighbor support decreased over a 10-year period worsened.²⁵ In Kütmeç Yılmaz's study, a significant relationship was found between older individuals' satisfaction with aging in place and their life satisfaction.^{19,21} The health-related lifestyle behaviors of older individuals living in nursing homes were determined to be at a moderate level.²⁴ In another study conducted in a Chinese sample, social support was found to be an effective factor on the perceived well-being of older individuals in maintaining life satisfaction and well-being.²⁶ In a study with older individuals with hypertension, those living with their spouses had good adherence to medication treatment.²⁷ In a study conducted with in-depth interview technique with older adults living in the Eskimo community, living with family members was stated to be an important factor in maintaining physical and mental health.²⁸ In Lee and Marier's study, it was found that maintaining neighborhood dependency and spousal support had a positive effect on the physiological health of dependent older individuals.²⁹ These findings suggest that the increase in satisfaction levels of aging in place obtained from this study is associated with an increase in adaptation to chronic diseases. However, no other study has been found in the literature that examines the relationship between aging in place satisfaction levels and adaptation to chronic diseases in older individuals. It can be said that this finding is related to the perception of familiar spaces, social support, and the presence of objects and people in the environment that contribute to the well-being of older individuals and encourage them to maintain their health.

CONCLUSION

In conclusion, it was determined that the levels of adaptation to chronic diseases among older individu-

als are related to variables such as age, marital status, employment status, type of chronic disease, place of residence, and the people they live with. Higher average satisfaction scores for aging in place were found among older individuals living in rural settlements, those who have resided in their current homes for a long time, and those who are female. A statistically significant positive correlation was detected between the satisfaction with aging in place and the adaptation to chronic diseases. In light of these results, during the follow-up and care processes related to chronic diseases in older individuals, it is essential to identify their living spaces and the people they live with. Support from family members should be provided to help them adopt the healthy lifestyle behaviors recommended for adapting to and managing their diseases.

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Conflict of Interest

No conflicts of interest between the authors and / or family members of the scientific and medical committee members or members of the potential conflicts of interest, counseling, expertise, working conditions, share holding and similar situations in any firm.

Authorship Contributions

Idea/Concept: Sümevra Mihrap İlder, Ercan Bakır; **Design:** Sümevra Mihrap İlder; **Control/Supervision:** Sümevra Mihrap İlder, Adile Neşe; **Data Collection and/or Processing:** Sümevra Mihrap İlder, Nuray Aydın; **Analysis and/or Interpretation:** Nuray Aydın, Adile Neşe; **Literature Review:** Sümevra Mihrap İlder, Ercan Bakır; **Writing the Article:** Sümevra Mihrap İlder, Adile Neşe, Ercan Bakır, Nuray Aydın; **Critical Review:** Sümevra Mihrap İlder, Adile Neşe.

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