

The relationship of kinesiophobia with depression and anxiety in nursing homes

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Abstract. – OBJECTIVE: Within the scope of our study, it was conducted to examine kinesiophobia and fear of falling in elderly individuals staying in nursing homes.

PATIENTS AND METHODS: Our study was conducted with 175 elderly individuals who stayed in nursing homes affiliated with the Ministry of Family and Social Policies in Ankara, Bolu, and Düzce provinces between January 2021 and April 2021. After the demographic information was obtained, the anxiety/fear of falling was evaluated with the Falls Efficacy Scale International (FES-I), kinesiophobia with the Tampa Kinesiophobia Scale, and the depression levels with the Beck Depression Scale.

RESULTS: A significant correlation was found between depression levels ($p=0.023$). A significant correlation was found between the anxiety/fear of falling and the number of chronic diseases, increasing age, female gender, and assistive device use ($p=0.011$). While there was a significant correlation between having a chronic illness, increasing age, the use of assistive devices, the presence of falls, and kinesiophobia, a significant negative correlation was found with physical activity ($p=0.033$).

CONCLUSIONS: As a result, while falling individuals had an increased kinesiophobia, it was observed that individuals with increased kinesiophobia had more anxiety/fear of falling, and individuals with this condition had higher levels of depression.

Key Words:

Activity, Kinesiophobia, Chronic, Fear, Old.

During the aging process, decrease in bone and muscle mass and deterioration in the joints are observed¹.

Physical activity requires energy. Physical activity has many benefits such as maintaining and increasing the amount of muscle strength, joint mobility, reducing the risk of vascular diseases, reducing the risk of depression and anxiety, prolonging life expectancy and reducing the risk of chronic diseases. Although physical activity has many benefits, the elderly avoid physical activity with increasing age². Among the reasons why the elderly do not engage in physical activity are lack of time, poor health, fear of falling and injury, negative attitude and lack of interest in exercise, and lack of a place and friends to do physical activity³. Having a mobility disability may cause the elderly person to fall or to be afraid and limit their movements after falling, thus causing further mobility disability. In other words, it can be thought that those with mobility impairments experience more fear of falling and falling, and this turns into a vicious circle⁴. Similarly, in another study, elderly individuals restrict their movements for fear of falling, leading to weakening of the muscles, resulting in impaired gait and ultimately increasing the risk of falling⁵. Kinesiophobia is the fear of movement and physical activity that is considered to cause injury⁶. Fear and pain are factors that impair physical performance; deteriorated physical performance increases the risk of falling in elderly individuals⁷.

Cardiac myocytes increase in size with increasing age, and accordingly, an increase in the thickness of the left ventricular wall and enlargement of the left atrium and pulmonary veins are observed. In aging, the heart and blood vessels undergo structural changes and the balance between elastin and collagen is disrupted⁸.

As a result of the increase in the amount of collagen and cross-links and the deterioration of elastin fibrils, the arteries become less flexible and there is an increase in arterial stiffness. As

Introduction

Aging is the irreversible deterioration of bodily functions. Aging is a natural and physiologically progressive state. In addition to the visible changes seen with aging, changes also occur in the musculoskeletal system. In order to provide daily functions in old age, the neuromuscular system must be functional; however, this system is adversely affected during the aging process.

a result, blood pressure increases⁹. Hypertension develops as a result of increased blood pressure. The mortality rate in the elderly is 50% and the morbidity rate is 70% due to hypertension; it has been reported that the incidence of coronary heart disease, congestive heart failure and stroke is much higher in hypertensive patients than in the elderly with normal blood pressure¹⁰. Multimorbidity is defined by the presence of two or more long-term conditions (LTCs), which are those that cannot currently be cured but can be controlled through medications or other treatments¹¹. The cardiovascular system undergoes numerous changes with age, even in individuals without significant cardiovascular disease. Postural hypotension is common in the elderly due to decreased efficiency of baroreceptor reflexes. Postural hypotension may cause balance disorder and thus fall in elderly people¹².

Major Changes Caused by Aging in the Respiratory System

While total lung capacity and carbon dioxide pressure in arterial blood (PaCO₂) do not change, residual volume, functional residual capacity and alveolar-arterial O₂ difference increase, and forced expiratory volume, forced vital capacity, expiratory flow rate, diffusion capacity, oxygen pressure in arterial blood (PaO₂) decrease². With advanced age in the lungs, ciliary activity decreases, and the defense mechanism in the body weakens. These two changes increase the risk of lung infection⁹. After the age of 65, not all airways open during normal breathing in the sitting position. After the age of 45, this change is seen in the resting state (lying). For this reason, the risk of atelectasis and pneumonia is higher in the elderly than in young people, especially in the case of staying in bed for a long time¹³. Maximum aerobic capacity (VO₂ max) also decreases with age. A decrease of 10% per decade after 25 years and 15% per decade between 50 and 75 years has been reported in sedentary persons. The decrease in aerobic capacity is less in women than in men¹⁴.

Physical Inactivity in Old Age

Increased insulin resistance increases the risk of coronary heart disease, myocardial insufficiency, hypertension and chronic diseases and causes these diseases to be seen at an earlier age, shortens life expectancy, increases mortality risk, causes obesity, cancer, osteoporosis and sarcopenia, increases the risk of depression, stroke and may lead to the formation of Type 2 diabe-

tes^{15,16}. In a study conducted among twins, it was found that a less physically active individual had a higher body mass index and had cellular features 10 years older than a more physically active individual. In the long term, physical inactivity can weaken functional capacities and increase the risk of falling¹⁷. Older individuals who have fallen avoid certain activities, are more afraid of falls, and as a result decrease their activity levels¹⁸. Aging is inevitable, but physical activity can help counteract the effects of aging¹⁶.

All fear behaviors are based on a sense of security in danger. Kori et al¹⁹ defined kinesiophobia as “an excessive, irrational and debilitating fear of physical movement and activity resulting from painful injury or vulnerability to injury. If the individual believes that greater exposure to certain stimuli will increase pain and suffering, the possibility of avoidance or escape will arise. This may lead to kinesiophobia^{6,20}. Avoidance behavior is a result of kinesiophobia and is seen as a natural response to injury, but if it lasts for a long time, it negatively affects physical and psychological functions²¹. Fear of movement/(re)injury leads to later inhibition and long-term discontinuation, depression, and disability increase⁶. Both depression and disuse are known to be associated with lowering pain tolerance levels and thus promoting painful experiences. In a study, it was found that patients with catastrophe are more likely to be fearful⁶. Reducing daily activities and functional capacity to prevent pain causes decreased physical activity, disuse, disability, and chronic pain²². It is known that long-term prevention of movements and activities causes harmful changes in the musculoskeletal system, and this situation is often referred to as “disuse syndrome”²³.

Patients with kinesiophobia avoid higher levels of physical activity as they have unnecessary and persistent sensitivity in their body. However, systematically increasing these activities is generally considered a condition for recovery²⁴. Studies have shown that individuals with high levels of kinesiophobia have poor physical performance and have excessive physical activity limitations²⁵.

A fall is explained as an event that causes a person to involuntarily return to the ground or other lows. About 30% of people over the age of 65 living in the community fall each year²⁶. The population of those aged 70 and over is decreasing by about 32-42% every year. In those older than 80-85 years of age, this rate rises to 50%²⁷. The risk and frequency of falls increase with age. Seniors over the age of 80 are most likely to fall and

be injured. Healthy elderly people without any disease have a 15% annual decrease. Individuals who fall have a two-thirds chance of falling in the next year²⁶. Older people living in long-term care homes fall more often than community residents. About 30-50% of people living in long-term care institutions fall each year⁸, and 40% of these experience recurrent falls. In a study conducted in Turkey, the frequency of falls in one year in elderly individuals was found to be 28.3%²⁸.

About one-third of people aged 65 and over in the community have a fall each year. Causes such as living in a long-term care home, being old, female gender, musculoskeletal diseases, postural hypotension, slippery floors and poor lighting increase the risk of falling⁸.

When the literature was reviewed, it was observed that there were many studies¹⁶⁻²⁰ on elderly individuals and fear of falling, but the relationship between kinesiophobia status and fear of falling in elderly individuals was limited. In this study, we examined this situation.

Patients and Methods

Participants of the Study

Elderly individuals included in the study were informed about the study before starting, and all elderly individuals read and signed the consent form stating that they voluntarily participated in the study.

This research was completed in Ankara, Bolu and Düzce provinces between January 2021 and April 2021. Research permission was obtained from the Ministry of Family and Social Policies for 16 state-owned nursing homes in Ankara, Bolu and Düzce; Private and foundation nursing homes were not included in the study. The research was completed in 15 nursing homes, as a state-affiliated nursing home official did not allow them to enter the institution on the grounds that they did not receive the official permit.

This study was aimed to reach 1,647 elderly people registered in the centers at the time of the research, by telephone and face-to-face interviews. 885 people stayed in special care (bedridden) and did not meet the inclusion criteria, 138 people did not want to participate in the study, 12 people were underaged, 79 people were not considered suitable by the physiotherapist of the institution, 86 people were out of the hospital or the city, 99 people could not be reached, 5 people had hearing problems lived, 4

people slept during working time, 4 people were illiterate even though they volunteered, and 2 people were sick during working time, so they could not be included in the study. The remaining 333 elderly individuals were subjected to the Standardized Mini-Mental Test (SMMT) could not be done. The research was completed with a total of 175 people, 57 women and 118 men, aged 65 and over, who were staying in nursing homes and met the inclusion criteria.

Purpose of the Research

This study aimed to examine the kinesiophobia and fear of falling/anxiety in individuals staying in nursing homes affiliated to the Ministry of Family and Social Policies in the provinces of Ankara, Bolu and Düzce.

Research Hypotheses

Hypotheses:

1. H_0 : There is no relationship between kinesiophobia and fear/anxiety of falling in elderly individuals.
 H_1 : There is a relationship between kinesiophobia and fear/anxiety of falling in elderly individuals.
2. H_0 : There is no relationship between the demographic data of elderly individuals and their kinesiophobia status.
 H_1 : There is a relationship between the demographic data of elderly individuals and their kinesiophobia status.
3. H_0 : There is no relationship between the demographic data of elderly individuals and their fear/anxiety of falling.
 H_1 : There is a relationship between the demographic data of elderly individuals and their fear/anxiety of falling.
4. H_0 : There is no relationship between the anxiety/fear of falling and kinesiophobia of elderly individuals and the level of depression.
 H_1 : There is a relationship between the anxiety/fear of falling and kinesiophobia of elderly individuals and the level of depression.

Methods

The following evaluation methods were applied to the elderly individuals included in the study.

1. Evaluation form
2. Mini Mental Test (MMT)
3. Tampa Kinesiophobia Scale (TKS)
4. International Fall Efficiency Scale (UDES)
5. Beck Depression Scale (BDI)

Standardize Mini Mental Test

The Mini Mental Test (MMT) was first published by Folstein et al²⁹ measure cognitive impairment in the elderly. MMT can be applied in 5-10 minutes by physicians, nurses, psychologists, physiotherapists and volunteers who have received a short training. Originally developed as a short screening tool for clinicians, the test is used to measure patients' eligibility for inclusion/exclusion in clinical trials and as a screening tool in clinical trials.

Tampa Kinesiophobia Scale

Miller et al³⁰ developed the Tampa Kinesiophobia Scale (TKS) as a measure of fear of movement/(re)injury. In the TSK, which consists of 17 items, a 4-point Likert scale was used for each item. Each item offers scoring alternatives ranging from 'strongly disagree' to 'strongly agree'. The total score is calculated after reversing the individual scores of items 4, 8, 12 and 16. Scoring ranges from 17 to 68. The cut-off rate in scoring is 37, and a score of less than or equal to 37 indicates low levels of kinesiophobia, while scores above 37 indicate high levels of kinesiophobia (5, 68). The higher the score, the higher the fear of movement. The Turkish reliability and validity study of TSK was performed by Yılmaz et al³¹ made by The test-retest reliability of the Turkish version of the TSK was found to be excellent. It is widely used to measure kinesiophobia with high internal consistency and adequate test-retest reliability.

International Relegation Activity Scale

The first scale, called the Falls Efficacy Scale International/FES-I, was developed by Tinetti et al³² to assess the perceived level of confidence in activities performed without falling in various sit-

uations. The original FES could be developed as a measure of fear of falling because the concepts of fear of falling and 'self-efficacy' or confidence in performing activities without falling may not be considered the same constructs. No element of the original FES directly assesses the impact of fear of falling on social life. In addition, the items in the original FES refer almost exclusively to basic activities of daily living that are simple or that people with disabilities may have difficulty with due to fear of falling, and do not include activities that are challenging or complex that may apply to more functional older people. For these reasons, a modified version of FES called FES-I was developed by Prevention of Falls Network Europe (ProFaNE).

Beck Depression Scale

The Beck Depression Inventory (BDI) was developed by Beck et al³³ it was developed by in 1961. This questionnaire consists of 21 categories and each category identifies a specific behavioral pattern of depression and includes 4 self-rated sentences. Explanations are ranked in order reflecting symptom severity from neutral to maximal severity. Numerical values 0-3 are assigned to each expression to indicate the degree of severity. The purpose of the scale was not to diagnose various depression, but to measure the degree of depression.

Gender and Age

The gender and age averages of the individuals included in the study are given in Table I. The individuals participating in the study consisted of a total of 175 people, 57 (32.6%) women and 118 (67.4%) men. The mean age of all individuals was 75.46±7.65 years. The mean age of women is 76.32±6.95 years and the mean age of men is 75.04±7.94 years (Table I).

Table I. Gender distribution and average age of individuals.

Gender * Group		Number		
		Percentage	Average Age	Min-Max Year
Gender	Women	57 32.6%	76.32±6.95	65-90
	Men	118 67.4%	75.04±7.94	65-97
Total		175 100.0%	75.46±7.65	65-97

n: number of individuals, %: percent, SD: standard deviation, min: minimum, max: maximum.

Table II. Occupation, income status and social security distribution of individuals.

		N	%
Distribution of Occupational Groups	Housewife	16	9.1
	Officer	32	18.3
	Teacher	29	16.6
	Worker	19	10.9
	Other	79	45.1
	Total	175	100
Distribution of Income Level	Retired	155	88.6
	No income	20	11.4
	Total	175	100
Social Security Status	Yes	174	99.4
	No	1	0.6
	Total	175	100

Physical Activity Area Status and Presence of Physiotherapist in the Nursing Home, Fall History and Cause Chronic illness, Assistive Device Use, and Physical Activity Status.

Occupation, Income Status, and Social Security

Occupation, income and social security status of individuals are given in Table II. According to these data, 32 people (18.3%) are civil servants, 29 people (16.6%) are teachers, 19 people (10.9%) are workers, 16 people (9.1%) are housewives, and 79 people (45%), (1%) has another occupation. When the income status of individuals is examined, it is seen that 155 (88.6%) are retired, 20 (11%) have no income (they stay in a nursing home free of charge). It is seen that 174 (99.4%) of the elderly individuals staying in a nursing home have social security, and 1 person (0.6%) does not have social security because they are staying as guests (Table II).

Considering the number of chronic diseases of the elderly individuals included in the study, 39 (22.3%) did not have any chronic disease, 23 (13.1%) had only hypertension, 14 (8%) had only heart. It has been observed that 6 (6.3%) have only diabetes and 64 (36.5%) have more than one chronic disease. Since the individuals included in the study had very different diseases from each other, they were grouped on the basis of numbers and the number of chronic diseases is shown in Table III.

132 (75.4%) of the participants do not use any assistive device, 29 (16.6%) use a single cane, 8 (4.6%) use a walker when they go shopping or go out, 6 (3.4%) stated that they used single crutches. When the physical activity status of individuals in the past is examined: 135 (77.1%) of the elderly individuals stated that they engaged in physical activity in the past, while 40 (22.9%) stated that

they did not engage in physical activity in their past. Considering the current physical activity status of elderly individuals: 106 (60.6%) of the individuals stated that they were doing physical activity, and 69 (39.4%) of them stated that they did not do physical activity. When asked about the types of physical activities performed by the individuals participating in the study: 56 (52.8%) of the elderly individuals were walking, 16 (15.1%) exercise, 2 (1.9%) pilates, 2 (1.9%) bocce and 30 individuals (28.6%) stated that they did more than one of these exercises (Table III).

140 (80.0%) of the individuals participating in the study stated that there was a physical activity area, and 35 (20.0%) said that there was no physical activity area in the nursing home they stayed.

152 (86.9%) of the elderly individuals stated that there was a physiotherapist in the nursing home, and 23 (13.1%) said that there was no physiotherapist. When asked about the fall history of the elderly individuals participating in the study: 53 (30.3%) of the elderly individuals stated that they had fallen in the last year, while 122 (69.7%) stated that they had not fallen in the last year. When examining how elderly individuals fall: 12 (22.6%) of the elderly individuals had foot tripping, 11 (20.8%) lost their balance, 8 (15.1%) were getting out of bed, 6 (11.3%) were wet or slipping on icy ground, 5 (9.4%) climbing stairs, 3 (5.7%) as a result of being hit by someone, 2 (3.8%) feeling of sudden discharge in the knee while walking, 1 (1%), 9% stated that while getting into the car, 1 (1.9%) fell due to their prosthesis and 4 (7.6%) fell due to more than one reason (Table IV).

Table III. Chronic discomfort, use of assistive devices and physical activity status of elderly individuals.

		N	%		
Number of Chronic Ailments	0	39	41.1		
	1	72	41.6		
	2	36	20.6		
	3	16	9.1		
	4 +	12	6.9		
	Total	175	100		
Assistive Device Use	Not Using	132	75.4		
	Crutches	6	3.4		
	Single Walking Stick	29	16.6		
	Walker	8	4.6		
	Total	175	100		
Physical Activity Status in the Past	Yes	135	77.1		
	No	40	22.9		
	Total	175	100		
Current Physical Activity Status	Yes	106	60.6		
	No	69	39.4		
	Total	175	100		
Types of Physical Activity Done	Walking	56	52.8		
	Exercise	16	15.1		
	Pilates	2	1.9		
	Bocce	2	1.9		
	Doing more than one exercise	30	28.6		
	Total	106	100		
		n	Min	Max	Average ± SS
Physical Activity Duration (number of days per week)	106	1	7	5.46 ± 2.13	
Physical Activity Time (total minutes per week)	106	30	1260	251.27 ± 215.29	

n: number of individuals, %: percent, SD: standard deviation, max: maximum, min: minimum.

TAMPA, UDES, BDI and MMT Averages of the Individuals Participating in the Study

The Mini Mental Test average of the individuals participating in the study was 25.88±1.79 points. The arithmetic mean of the TAMPA kinesiophobia scale is 56.66±9.35. TAMPA kinesiophobia scale was applied to the individuals who did not fall, by removing the question number 6 and it was calculated as a percentage. Considering the general average of individuals, it can be said that they have fear of movement. The arithmetic mean of the International Falling Efficiency Scale is 23.62±6.53. It is seen that individuals generally have an anxiety/fear of falling. The arithmetic mean of the Beck Depression Inventory is 10.11±6.22. It was observed that the elderly individuals participating in the study had a low level of depression in general (Table V).

Statistical Analysis

The study data were analyzed and tabulated using the SPSS 17 package program (SPSS Inc., Chicago, IL, USA). Values obtained from the UDES and BDI scale results, which were considered within the scope of the study, were evaluated with parametric tests since they showed normal distribution, and the results of the TAMPA scale were evaluated with non-parametric tests because they did not show normal distribution. *p*-value was considered statistically significant when <0.05.

A significant correlation was found between depression levels (*p*=0.023). A significant correlation was found between the anxiety/fear of falling and the number of chronic diseases, increasing age, female gender, and assistive device use (*p*=0.011).

While there was a significant correlation between having a chronic illness, increasing age, the use of assistive devices, the presence of falls,

Table IV. Physical activity area status and physiotherapist presence in the nursing home for elderly individuals, fall history and cause.

		N	%
Physical Activity Area Status in Nursing Home	Yes	140	80.0
	No	35	20.0
	Total	175	100
Physiotherapist Presence in the Nursing Home	Yes	152	86.9
	No	23	13.1
	Total	175	100
Fall History	Yes	53	30.3
	No	122	69.7
	Total	175	100
Causes of Falls	foot attachment	12	22.6
	loss of balance	11	20.8
	getting out of bed	8	15.1
	Slip on wet/icy surfaces	6	11.3
	from the ladder	5	9.4
	by someone hitting	3	5.7
	Sudden feeling of discharge in the knee while walking	2	3.8
	getting in the car	1	1.9
	Because of the prosthesis	1	1.9
	for more than one reason	4	7.6
Total	53	100	

n: number of individuals, %: percent, SD: standard deviation, max: maximum, min: minimum.

and kinesiophobia, a significant negative correlation was found with physical activity ($p=0.033$).

Results

The mean age of the individuals participating in our study was 75.45 years, and the mean age of women²⁷ was found to be higher than that of men³. It was observed that the ages of the individuals staying in the nursing home who participated in our study were compatible with the literature.

In our study, it was found that 78.2% of the individuals participating in the study were widowed (whose spouse died or divorced), 12.7% were

married and 9.7% were single. Yeşilbakan et al³⁴ in their study, the reasons for staying in a nursing home for the elderly were 62.5% ‘on their own will’, 12.8% ‘loneliness’, 2.6% ‘the desire of their family’, 2.6% ‘to be looked after better’, and 1.3% stated as ‘obligation’ respectively³³. In our study, we observed that they mostly expressed ‘loneliness’, ‘self-will’, ‘reason for health’, ‘thinking that the nursing home is more comfortable’, ‘because they have difficulty in taking care of themselves’, ‘necessity’, ‘because they do not want to be a burden to their children’, respectively.

Falls in the elderly are a major social problem²⁶. About 30% of individuals over the age of 65 have at least one fall. In our study, the incidence of falling in the last year of individuals living in nursing homes was found to be 30.3%, which is compatible with the literature.

Table V. TAMPA, UDES, BDI and MMT averages of the individuals participating in the study.

PMMT	175	25.88±1.79	24.00	30.00
TAMPA	174	56.67±9.35	34.37	82.81
UDES	174	23.62±6.53	16.00	52.00
BDI	174	10.11±6.22	0.00	35.00

MMT: Mini Mental Test, TAMPA: Tampa Kinesiophobia Scale, UDES: International Relegation Activity Scale, BDI: Beck Depression Scale, n: number of individuals, SD: standard deviation.

Discussion

When the literature is examined in terms of gender and falls, it is seen that women have a higher incidence of falling than men. In the study conducted by Karataş et al³⁵, they found that female gender increased the risk of falling approximately

4 times in the age group 65 years and older. In his study, Lök³⁶ found that women experienced more falls than men, and this difference was statistically significant. In our study, 36.8% of female individuals and 27.1% of male individuals stated that they had fallen in the last year. This result, in line with the literature, shows that female individuals experience more falls than male individuals.

Saulicz et al³⁷ in their study, they stated that individuals with lower kinesiophobia in old age had significantly higher physical activity levels in youth. In our study, the kinesiophobia levels of individuals who were more physically active in the past were found to be significantly lower. This highlights the importance of being physically active in the past for the old age.

In the study conducted by Yeşilbakan and Karadakovan³⁴, it was determined that 45.4% of individuals in the 65-79 age group and 53.8% of individuals aged 80 and above experienced falling. In our study, it was found to be 28% in the 65-74 age group, 29.2% in the 75-84 age group, and 39.3% in the 85 and over age group. This result shows that the incidence of falls increases with increasing age, which is consistent with the literature. This may be due to decreased muscle strength and increased in the environmental needs of the elderly age increases.

Limitations

This study has several limitations. Our study is limited to people aged 65 and over and it was limited to those who volunteered to participate. Our study was limited to people who scored 24 or higher on the Mini Mental Test, to individuals who can walk with the device or independently, and to people who can read and write in Turkish.

Conclusions

In this study – which was planned to examine the kinesiophobia and fear of falling of elderly individuals living in nursing homes – the demographic information, kinesiophobia, fear of falling and depression levels of the individuals were evaluated. As a result of this study, statistically significant correlations were found between some demographic information and the levels of kinesiophobia, fear of falling and depression.

It was found that women fell more than men.

In our study, it was found that individuals using assistive devices had higher fall anxiety, kinesiophobia, depression levels and the number of falls.

It was observed that the use of assistive devices increased with increasing age. Karatas and Maral³⁵ found that those who use assistive devices experience more falls than those who do not. Yesilbalkan and Karadakovan³⁴ reported that 29.7% of elderly individuals use assistive devices and that individuals who use assistive devices fall more. When other studies³⁴ in the literature are examined, it has been found that elderly individuals who use assistive devices have more fear of falling.

The higher the number of chronic diseases, the higher the risk of falling. In his study, Lök³⁶ found that those with chronic diseases experienced more falls than those without, and this difference was statistically significant. In our study, a statistically significant difference was found between the number of chronic diseases and the presence of falls, consistent with the literature. Individuals with chronic conditions experience more falls than those without.

Conflict of Interest

The author declared no conflict of interest.

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Ethics Approval

Gazi Yaşargil Research and Training Hospital Ethics Committee approved this study (Date: 12.11.2021, number: 422).

Informed Consent

All participants included in the study were informed about the study before starting and they all read and signed the consent form stating that they voluntarily participated in the study.

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