European Review for Medical and Pharmacological Sciences 2023; 27: 2305-2313

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 f d between depression levels (p=0.023). A cant correlation was found between the a y/ fear of falling and the number of chronic di es, increasing age, female gender, and assis device use (p=0.011). While there was a sig icant correlation between hav hronic i ness, increasing age, the us e devic es, the presence of falls, kines obia, a significant negative cor on was with physical activity (p=0.033).

CONCLUSIONS: res e falling individuals had an i sed kine obia, it was observed that i als with ind d kinesiophobia had m a y/fear of fa g, and individuals wit is co n had higher levels of depres .

Key W
A y, Kines obia, Chronic, Fear, Old.

oduction

is the irreversible deterioration of bodi- Aging is a natural and physiologi- lly progressive state. In addition to the visible ges seen with aging, changes also occur in th sculoskeletal 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. During the aging pr decr in bone and muscle mass and ete i the i are observed[1].

Physical a y requires sical activity has m fits such as taining and increasing e an of muscle strength, joint mobility, reducing t k of vascular diseases, redu e risk of dep n and anxiety, prolo g life expectancy an reducing the risk of c nic diseases. lthough physical activity has benefits, t lderly avoid physical activity w creasing . Among the reasons why the eld not ge in physical activity are lack of time ealth, fear of falling and injury, negative attitude and lack of interest in exercise, k of a place and friends to do physical activity aving 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 circle[4]. 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 falling[5]. Kinesiophobia is the fear of movement and physical activity that is considered to cause injury[6]. Fear and pain are factors that impair physical performance; deteriorated physical performance increases the risk of falling in elderly individuals[7].

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 disrupted[8].

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

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a result, blood pressure increases[9]. 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 pressure[10]. 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 treatments[11]. 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 people[12].

Major Changes Caused by Aging in the Respiratory System

While total lung capacity and carbon dioxide pressure in arterial blood ($PaCO_2$) do not change, residual volume, functional residual ca... and alveolar-arterial O_2 difference increa... forced expiratory volume, forced vital c...ity, expiratory flow rate, diffusion capacity, ...gen pressure in arterial blood (PaO_2) decrea... With advanced age in the lun...ry activ...ty decreases, and the defens...ch...n in the body weakens. These two ...nges i...ease the risk of lung infection[9]. ... the a... all airways open duri...no... ...ning ...e sitting position. A... ...e age ... this change is seen in the rest... ...ate (lying). ... ...is reason, the risk of atel... ...pneumonia ...igher in the elderly tha...n you... ...ple, especially in the case of st...g in bed for a... ...time[13]. Maximum aerobic ...acity (VO_2 max) ... decreases with age. ...crease... ...10% per decade after 25 years an... per ...de bet...een 50 and 75 years has been ...n sede... persons. The decrease ...robi... ...city i...s in women than in men[14].

Ph...cal Ina...ty in Old Age

...d insulin resistance increases the o... ...ary heart disease, myocardial in...fficiency, hypertension and chronic diseases ...causes these diseases to be seen at an earlier ag... ...ortens life expectancy, increases mortality risk, causes obesity, cancer, osteoprosis and sarcopenia, increases the risk of depression, stroke and may lead to the formation of Type 2 diabetes[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 ...ive individual. In the long term, physical ... can weaken functional capacities an... ...rease the risk of falling[17]. Older individuals ... ...have fallen avoid certain activities, are more ... ...of falls, and as a result decrease their ...ivity l... Aging is inevitable, but phy... activity ... counteract the effects o... ...g[16].

All fear behaviors ...based ... sense of security in danger. K...ri... ...ed kin... phobia as "an exce..., irra... and ...itating fear of physic... ...ovement a... ...ti... resulting from painfu... ...or vulnerab... ...o injury. If the indiv...l be... that greater exposure to certain stimuli will ...se pain and suffering, the ...ty of avoida... ...r escape will arise. T... ...ay lead to kinesioph...bia[6,20]. Avoidance be...or is a result ...kinesiophobia and is seen as a ...ral response ...njury, but if it lasts for a long t... ...t negative... ...fects physical and psychological ...ions[21]. ...r of movement/(re)injury leads to later ...n and long-term discontinuation, depression, and disability increase[6]. Both depression and disuse are known to be associated with ...we... pain tolerance levels and thus promoting painful experiences. In a study, it was found that patients with catastrophe are more likely to be fearful[6]. Reducing daily activities and functional capacity to prevent pain causes decreased physical activity, disuse, disability, and chronic pain[22]. 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 recovery[24]. Studies have shown that individuals with high levels of kinesiophobia have poor physical performance and have excessive physical activity limitations[25].

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 year[26]. 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 year[26]. 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 year[8], 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 falling[8].

When the literature was reviewed, it was observed that there were many studies[16-20] 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 informed about the study before starting, and elderly individuals read and si e conse form stating that they volunt pa pated in the study.

This research was co d in A and Düzce provinces we y 202 d April 2021. Resea permiss as obtained from the Minist Family and l Policies for 16 state-o ing homes Ankara, Bolu and Düz , Priva d foundation nursing homes w ot included e study. The research completed in 15 ng homes, as a state nated ing home official did not allow the enter institution on the grounds that they d eive th icial permit.

This was ed to reach 1,647 elderly ple in the centers at the time of research y telephone and face-to-face in 885 people stayed in special care nd did not meet the inclusion criteria, 138 people did not want to participate in study, 12 people were underaged, 79 people w ot 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 re ing 333 elderly individuals were subje Standardized Mini-Mental Test (S T) could not be done. The research was c ted with a total of 175 people, 57 women and n, aged 65 and over, who were stayi n nur mes and met the inclusion crit

Purpose of the Re ch

This study aim t e kin phobia and fear of f g/anx indivi s staying in nursing es affiliat h nistry of Family and licies in the nces of Ankara, Bol d Du

Re Hypothese

potheses:

H_0: There is relationship between kinesiophobia and /anxiety of falling in elderly individuals.

relationship between kinesiophobia and ear/anxiety of falling in elderly individuals.

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 al[29] 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 al[30] 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 the fear of movement. The Turkish reliabili d validity study of TSK was performed by Yi et al[31] made by The test-retest reliability of Turkish version of the TSK wa d to be e cellent. It is widely used to siopho- bia with high internal co ncy an dequate test-retest reliability.

International Re tion A ty Scale

The first scal ed the Falls acy Scale International/F developed inetti et al[32] to assess t perce evel of confidence in activities ormed witho ling in various situations. 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 m t be considered the same constructs. No the original FES directly assesses t mpact o fear of falling on social life. In ad the items in the original FES refer almost exc ly to basic activities of daily living t are si that people with disabilities m ave difficu due to fear of falling, an not in de acti that are challenging c plex may apply to more functional ol these ons, a modified versi f FE d FES as developed by P tion of Fa Europe (ProFaNE).

Beck Depression

k Depressio tory (BDI) was de- v d by Beck et al[33] it wa developed by in 1961. questionnair consists of 21 categories and category ide es a specific behavioral pattern o ression an cludes 4 self-rated sentences. Exp nked in order reflecting symptom se n neutral to maximal severity. Numerical values 0-3 are assigned to each expression ate the degree of severity. The purpose of the s 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).

Tabl stributio d average age of individuals.

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

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
	Worker	19	
	Other	79	45
	Total	175	100
Distribution of Income Level	Retired	155	88.6
	No income	20	1
	Total	175	
Social Security Status	Yes	174	99.4
	No	1	0.6
	Total	175	

Physical Activity Area Status and Presence of Physiotherapist in the Nursing [illegible], [illegible]istory and Ca[illegible] 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 teache[illegible]9 people (10.9%) are workers, 16 people (9.[illegible] housewives, and 79 people (45%), (1%) ha[illegible]n-other occupation. When the income status o[illegible] dividuals is examined, it is seen that 155 (88.6[illegible] are retired, 20 (11%) have no i[illegible] (they sta[illegible] in a nursing home free of ch[illegible]). It[illegible]een that 174 (99.4%) of the elderly [illegible]viduals[illegible]ying in a nursing home have so[illegible]ecurit[illegible] son (0.6%) does not h[illegible] so[illegible]ity bec[illegible]e they are staying as[illegible]sts (Tab[illegible]

Considering t[illegible]umber of c[illegible] diseases of the elderly [illegible] included [illegible]e study, 39 (22.3%) di[illegible]ot ha[illegible] chronic disease, 23 (13.1%) h[illegible]ly hyperte[illegible]14 (8%) had only heart. [illegible]s been observed[illegible] 6 (6.3%) have only [illegible]etes a[illegible]4 (36.5%) have more than one ch[illegible] disea[illegible]since the individuals included in the st[illegible]very di[illegible]nt diseases from each [illegible], th[illegible]e gr[illegible]d on the basis of numbers a[illegible]e nu[illegible]hronic diseases is shown in Tab[illegible]II.

[illegible]75.4%) of the participants do not use any [illegible]ce, 29 (16.6%) use a single cane, 8 [illegible]6%) use a walker when they go shopping or go [illegible]6 (3.4%) stated that they used single crutches. W[illegible] 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 th[illegible]id not engage in ph[illegible]ical activity in their [illegible] Considerin[illegible]the current physical activity [illegible]s of elderly [illegible]ividuals: 106 (60.6%) of the i[illegible]duals state[illegible]at they were doing physical acti[illegible]nd [illegible]9.4%) of them stated that they did not [illegible]cal activity. When asked about the [illegible]ypes of physical activities performed by the individuals participating in the study: 56 (52.8%) of [illegible]ly 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
	3	16	
	4 +	12	6.
	Total	175	100
Assistive Device Use	Not Using	132	75.4
	Crutches	6	3
	Single Walking Stick	29	
	Walker	8	.6
	Total	175	100
Physical Activity Status in the Past	Yes	135	
	No	4	
	Total		
Current Physical Activity Status	Yes	106	60.6
	No	9	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	than one exer	28.6
	Tot	106	100

		Min	Max	Average ± SS
Physical Activity Duration (number of days per week)	106	1	7	5.46 ± 2.13
Physical Activity Time (total minu)	106	30	1260	251.27 ± 215.29

n: number of individuals, %: pe , SD: stan deviation, ax: maximum, min: minimum.

TAMPA, UDES and MMT A f the Indi als Participating n the dy

The M Mental Test ge of the individuals p pating in the st was 25.88±1.79 point ne ari etic mean of the TAMPA kinesiophobia is 56.66±9.35. TAMPA kinesiophobia was apl to the individuals who not r ng the question number 6 was c as a percentage. Considering the eral ave e of individuals, it can be said th have fear of movement. The arithmetic an of 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 consider statistical significan 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	0
Fall History	Yes	53	30.3
	No	122	69.7
	Total	175	100
Causes of Falls	foot attachment	12	
	loss of balance	11	.8
	getting out of bed	8	
	Slip on wet/icy surfaces		
	from the ladder		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 de… maximum, min: minimum.

and kinesiophobia, a significant negative cor… tion was found with physical activity (p=0.033…

Resul…

The mean age of t… ind… articip… g in our study was 75… ears, a… mean age of women[27] was fou… e higher th… t of men[3]. It was observe… ages of the …ividuals staying in the …ursing … who participated in our study… compatibl… the literature.

In o… udy, it was found … 78.2% of the individ… partici… ng in the study were widowed (wi… spou… ied or divorced), 12.7% were …and 9.7% were single. Yeşilbakan et al[34] 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' respectively[33]. 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 problem[26]. 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.

…V. T… …, BDI and MMT averages of the ind… …ls partic… …n the study.

…	175	25.88±1.79	24.00	30.00
…	…4	56.67±9.35	34.37	82.81
…UDES	174	23.62±6.53	16.00	52.00
…I	174	10.11±6.22	0.00	35.00

MM… 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 al[35], they found that female gender increased the risk of falling approximately

4 times in the age group 65 years and older. In his study, Lök[36] 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 al[37] 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 Karadakovan[34], 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 wi[illegible] literature. This may be due to decrease[illegible] cle strength and increased in the environ[illegible]al needs of the elderly age increases.

Limitations

This study has several li[illegible]ion[illegible]r study is limited to people aged [illegible]d over[illegible]d it was limited to those who vo[illegible]red t[illegible]. Our study was limite[illegible] p[illegible] score[illegible]4 or higher on the Mi[illegible]ental [illegible] individuals who can walk wi[illegible]e device or[illegible]endently, and to people [illegible]d and writ[illegible]Turkish.

Conclusi[illegible]

[illegible]is st[illegible]– which was planned to examine th[illegible]phobia[illegible]ear of falling of elderly [illegible]vidua[illegible]ing i[illegible]rsing homes – the demo[illegible]c inf[illegible] kinesiophobia, fear of falling[illegible]d depres[illegible] levels of the individuals were ev[illegible]. As a result of this study, statistically [illegible] relations were found between some [illegible]mographic information and the levels of kinesi[illegible]bia, fear of falling and depression.

[illegible]as 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 Maral[35] found that those who use assistive devices experience more falls than those who do not. Yesi[illegible]n and Karadakovan[34] reported that 29.7% individuals use assistive devices and [illegible]ndividuals who use assistive devices fall m[illegible]When other studies[34] in the literature are examin[illegible]has been found that elderly individuals[illegible]o use a[illegible]e devices have more fear of fall[illegible]

The higher the numb[illegible] chron[illegible]disease[illegible] higher the risk of falli[illegible]n his s[illegible], Lök[36] found that those with chr[illegible]ic [illegible]perienc[illegible]more falls than those w[illegible]t, an[illegible]differen[illegible]as statistically signif[illegible]. In our stu[illegible]tically significant diff[illegible]as found be[illegible]the number of chronic[illegible]ease[illegible]the presence of falls, consistent with the literat[illegible]ndividuals with chronic cond[illegible]xperience mo[illegible]ls than those without.

Conflict of Inte[illegible]

T[illegible]thor declared[illegible]conflict of interest.

Funding

[illegible]his research received no specific grant from any funding [illegible]the public, commercial, or not-for-profit sectors.

Acknowledgements

We would like to express our gratitude to Dr. Muhammed Burak Örten and Dr. Kenan Abbasov, who took the time to develop and edit this article.

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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