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The Relationship Between Fear of Falling Movement with Anxiety, Functional Flexibility and Balance Nursing Home

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Abstract

According to the World Health Organization, ageing is a period of life that begins between 60 and 65. This study aimed to determine the relationship between fear of falling and anxiety, balance and functional mobility of female elderly and men. The study's statistical population consisted of male and female elderly in the Sari sanatorium. They selected 60 subjects (30 males and 30 females), ranging in age from 65 to 75 years), and they were randomly assigned to groups. Data were collected using the personal information questionnaire, fall efficiency - international form questionnaire, and the Hamilton anxiety rating scale. Elderly balance Also, their leaf motility was assessed using the leaf balance test and their stand-up mobility was assessed by the timing test. Another additional test called 30 seconds of getting up and sitting was measured. Data were analysed using regression analysis in SPSS16 software with a significance level of 0/05. The results show that there is a significant relationship between fear of falling and balance and anxiety in the elderly; but the connection between fear it does not make sense to fall with functional mobility; therefore, the fear of falling plays an essential role in balance and anxiety It has older men and women and should be considered in studies on the balance of the elderly.

Introduction

Ageing is a period that most people experience in their lifetime. With age and reaching this age, the risk of disease increases and functional abilities and the power of the senses decreases. These changes in the biological environment and the quality of psychological and social life threaten older people and prevent them from engaging in daily activities. Due to this ,this segment of society's inevitable changes and problems need special attention and care. The aim of this preventive attention and respect for the elderly has not only to reduce premature deaths; but preservation capabilities and improve their quality of life [1]. Today, about two-thirds of all the elderly in countries are living in the development, and by 2025 this figure will reach 75%. In developed countries, significantly older people (80 years and older) are the group with the fastest population growth. Currently, Iran is leaving behind the demographic change (according to the census 2014), with more than 27% of the elderly over 60 years old and an ageing country. Ageing is a period with gradual, progressive and progressive erosive changes.

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Spontaneity is associated with most of the body's physiological systems and functions [2]; of these changes, we can point to the difference in the devices involved in balance control that can expose the elderly to Serious injuries due to loss of balance, including bone fractures and long-term disabilities. Some evidence suggests that mobility to achieve independence in performance and increase the quality of life for the elderly is essential and physical activity can be effective by improving weaknesses. Physiological factors such as muscle weakness and balance reduce the risk factors involved in falling. As an event that leads to an unintentional fall, as a result of factors such as tolerating a Traumatic shock, loss of consciousness, sudden onset of paralysis (such as a heart attack), or Non-convulsive epilepsy occurs and is one of the major concerns of the elderly [3]. In this regard, 82% of falls were due to low-level, and 18% were injuries. Two of them lead to severe injuries requiring a doctor. Bandura also refers to this point. In addition to physical and physiological factors, psychological factors such as self-efficacy falling (not being afraid of falling) are also associated with falling; these two indicators are based on Bandura's self-efficacy hypothesis [4].

Bandura's self-efficacy is the perception of one's abilities in a particular area of defined activities. They were falling from the common problems of the elderly. They experience it at least once a year, and its rate reaches 30% in people over 65 .These falls cause physical complications) soft tissue damage and pelvic, thigh and arm fractures (Loss of self-confidence, depression, increased fear and decreased life expectancy (and even death). May the family, the result, and the cost to the doors and the community (slow down the high) [5]. According to studies, Fear of falling is pervasive among the elderly. Its prevalence ranged from 80 ages to 40%. They fall into a temporary panic over an apparent threat Studies show that although some older people are afraid of losing, they are exposed to many dangers of falling. Still, other seniors are not like that, and despite high scores on these factors, they are less likely to fail [6]. Some of these factors may take the form of anxiety disorder; therefore, a statistical diagnostic guide for mental disorders. Also, anxiety disorder has been considered a fear of falling in the elderly the year. In addition, some researchers have reported that people with the fear of falling have more worries in other areas, and they have activities. These symptoms may indicate high anxiety or worry about things referred to as "generalized anxiety disorder. The sharp decline caused by these psychological factors in physical activity can have devastating consequences for a person's health, and the elderly will follow [7].

Including loss of individual independence, isolation and reduced readiness, A body that can itself increase the risk of losing balance and falling; However, recently, some meta-analytic studies have acknowledged that we cannot confidently improve our fear of falling as a result of sports activities and training programs commented and to gather evidence and adequate documentation in this regard should first link the fear of falling with functional activities such as mobility And understand the balance well so that appropriate interventions can be planned based on it [8].

A systematic study concluded that the fear of falling is not necessarily similarly related to anxiety, and research usually focuses on stress in the literature. Also, previous studies have shown that living at home with older people is negatively associated with the level of physical and functional activity of the elderly. The number of residents in these sanatoriums is less than the number of older adults living in their homes [9]. Limitations of functional mobility in the elderly reduce the quality of life and create dependence. It is a closed-loop that affects their mental state in their daily activities. Physical persons, especially in nursing environments, will show. In various studies, fear of falling is found in the elderly; especially people with balance or rest problems, and it Is more common in nursing homes: however, this psychological factor alone cannot be problematic; instead, when it interferes with the activities of daily living, it poses a severe risk it leads to more medication, reduced physical activity and an increased risk of falling and is hospitalized [10]. However, avoiding activities related to the fear of losing the elderly is highly prevalent. Still, it is unclear whether these people perform basic activities such as balance. The conditions of functional mobility and the reason for avoiding those activities are only due to whether it was their anxiety or not. In addition, it is unclear what the relationship is between them.

Which relationship between variables can predict the performance of the elderly and plan cognitive interventions, or does proper movement help. In this regard, only in a few studies is the simple communication of a variable psychological with reference balance [11]. In their research, without

considering the level of anxiety of the elderly, they concluded that the elderly are afraid of falling into Equilibrium ability and limited balance self-efficacy. The fall efficiency scale was also used to examine the relationship between fear of falling and balance. Still, in aspects, the anxiety of the elderly was not heeded. A meta-analytic study pointed out the need to pay attention to the anxiety variable and falling efficiency in the elderly [12]. Despite being in this study showing that the elderly had several medical problems, the most substantial connection between psychological factors and anxiety, equivalent to (r = 0.68), was reported, indicating that further studies may be needed. A homogeneous population of the elderly is older people in nursing homes. Therefore, in this study, we are looking for the answer to the difference between fear of falling and anxiety and what is objectively fatal. Elderly movement (mobility in the environment, balance or sports activity) is observed. What is the relationship? There is a connection between determination, the fear of falling into anxiety, balance, and functional mobility—the elderly's house for men and women.

Research Method

The research method is present and is a descriptive correlational study that is statistically complete; older men and women aged 65 to 75 formed a nursing home in Sari. From the statistical population, 60 people were randomly selected from the nursing home into two groups of 30 people (men and women). Criteria for inclusion in the research were: voluntary participation in research and minimum gain, Failure to use an assistive device, defect "Score of 34 out of 30 in" minimum consciousness assessment questionnaire, Uncorrected hearing and vision and amputation due to illness, lack of temporary problems affecting balance in Test day and dependence of people in wheelchairs. It is worth noting that some of this information is from the file subjects, and others were collected as personal reports.

International Form of Fall Efficiency Scale: This 16-item has been developed, and its validity has been determined. The items of this questionnaire have four Options) I'm apprehensive, so I'm not worried at all (are) a score of one to four (and the score of each subject. The score is 16 questions (between 16 and 64); A higher score means more fear of falling or lower efficiency. The translation of this tool in Iran has also been validated and reported as equivalent to 0/98.

Hamilton Anxiety Rating Scale: Between 1902 and 1905, Hamilton was classified into clinical scales to assess the severity of anxiety. This test in Iran by Haghshenas was validated with (the amount of 0/81) and has 14 items. In this test, Scored by the examiner, each item has five ranks, depending on the severity of the symptoms, from zero to four. Gets a score; Zero indicates the absence of that symptom, and four shows that symptom in the pattern. This scale covers a wide range of symptoms that are recognized as symptoms of an anxiety state. These symptoms include anxiety, tension, insomnia, difficulty concentrating, depressed mood, tremor muscle tension, general physical condition, cardiovascular signs, respiratory symptoms, gastric ulcer Intestinal, and symptoms related to the urinary tract.

Leaf Balance Test: A leaf balance test to measure the balance of the elderly by the Canadian leaf physiotherapist was introduced, including 14 different activities with simple tasks such as standing and sitting and complex movement tasks such as turning 360 degrees and standing on one leg. The motor manoeuvres of the leaf balance scale are: Sitting without support, maintaining a standing position with legs apart, maintaining a vertical position with legs attached, maintaining an upright position with eyes closed, standing with one foot in front of the other, standing on one foot, sitting Standing on a chair, standing from a sitting position on a chair, moving from bed to chair, Rotate to the sides, rotate 302 degrees, lift an object off the ground, reach forward and weight transfer forward, weight transfer on the legs alternately. Depending on the test's performance and quality, the individual may score zero (minimum score) at each stage. Assign a "maximum score" to four, which means a score of four means the full ability and a score of zero. This means the inability to perform the activity; therefore, the maximum score a person can get on this test Is 20, and the higher the score, the better the balance.

Going Uptime Test: to measure functional mobility from the rising test, we have time to go along with another complimentary test called 30 seconds of getting up and sitting. Validity and reliability of the country's timed take-off and departure test, respectively (0/81) and (0/98), have been reported.

This test consists of six steps the subject must pass in a row. To perform this test in the present study, first, a chair without handles at a distance of three meters from an obstacle (end of the route). Then, the subject was asked to help without Getting his hands off the chair, walking three meters back, and sitting on the chair. This test is performed as quickly as possible without running. To get acquainted with how to perform the test, take the test of preconditions bypassing the test three times, and then complete the test three times, and their average is the number of subjects tested per second. Solution of the test solution is loud: getting up from the chair; during Dunker, the essential way to avoid the course; It was found; The return of the path of the three seats of the second Zandor; step in meters; the chair. Sit down and listen to the command "R", which calculates the temporal motion of the test from the beginning to the end and our test results.

Test 30 Seconds of Getting up and Sitting: In addition to this testability, an indicator of the strength and Provides motor endurance for the elderly. In this test, the person must sit in a standard chair, Place hands on your chest as many times as possible within 30 seconds, get up, and Repeat the sitting completely. The number of times the period lasts 30 seconds to the person registered as the score Turns. It should be noted that the reliability of this test is equal to (0/92) reported.

First, the subject of the question (name of personal information registration) including age, sex, education, history of falling during the last year, they completed the place of residence, etc. It should be noted that all the subject's written consent was obtained to participate in the study. Then, both groups dropped the efficiency questionnaire international form and completed the Hamilton anxiety rating scale. The international forum of the fall efficiency scale was used to measure the efficiency of one fall (fear of falling). It is worth that a self-reported scale is an essential tool for measuring know the balance. Next, the balance of the elderly using the leaf balance test and functional mobility using the timed take-off and walk test and another complementary test called 30 Stand-up seconds were measured. Descriptive statistics were also used to categorize the data. The Shapiro-Wilk test was used to examine the normal distribution of data. Regression analysis, as well as variables, were used to investigate the relationships. It is worth noting that all these steps with SPSS16 software were used at a significant level.

Results

The table in the number one descriptive information (mean and standard deviation) samples the research provides is this table. What was the condition of the subjects in terms of age, height and weight?

Table 1. Individual tables of gender subject

Group	Indicators	Age	Height (cm)	Weight (kg)
Female	Average	67/43	166/27	67/20
	Standard deviation	2/176	4/913	7/845
Male	Average	69/53	171/77	74/63
	Standard deviation	4/041	4/561	9/747
Total	Average	68/48	169/02	70/92
	Standard deviation	3/378	5/457	9/539

Nasal prognostic variables are presented. In the tables, the share of variance justifies the amount of meaning in the model with its level of meaning. As can be seen in table 2, this model explains 51/3% of the variance.

Table 2. Model summary

Model	R	R squared	Adjusted R squared	Standard estimation error
1	0/716	0/513	0/487	4/656

In the regression analysis of Table 3, the regression model using the input method Significant was obtained. F (3.56) = 19.633; P <0.005 adjusted; R squared = 0.513

Table 3. Results of analysis of variance for fear of falling

Model	Indicators	Sum of squares	Degrees of freedom	Average square	F	Meaning
1	Regression	1276/708	3	425/569	19/633	0/001
	Remain	1213/875	56	21/676		
	Total	2490/583	59			

Table 4 provides information on the model prediction variables. It can be seen that functional mobility (TUG) is not a significant predictor, but two other variables, Hamilton anxiety and leaf balance, are significant predictors.

Table 4. Standardized and non-standardized regression coefficients of model variables

Model	Variable	B	Standard error	β	t	Meaning
1	Static	79/137	23/969		3/302	0/002
	Hamilton anxiety	0/472	0/089	0/522	5/292	0/001
	Leaf balance	-0/953	0/255	-0/379	-3/735	0/001
	Functunal mobility	-0/379	0/454	-0/082	-0/835	0/407

Discussion and Conclusion

This study aimed to determine the relationship between fear of falling and anxiety, balance and functional mobility .The elderly were 65 to 75 years old in a nursing home. The results showed that there is communication between fear of falling with balance and anxiety of elderly, but the relationship between the fear of falling of the elderly and their functional mobility. No significance was observed; therefore, it is probably not expected that as the fear of falling increases elderly, their functional mobility in the environment is reduced. These results are consistent with the findings of studies that are not aligned. The probability of this discrepancy could be the living conditions of the subjects. The elderly studied by these researchers lived in non-hospital settings, and this difference in lifestyle or mobility in the environment has led to such findings.

On the other hand, there are differences in tools and measurements mentioned in their research. The falling fear assessment questionnaire activity-avoidance was used, while the present study used the efficiency drop-out questionnaire. It has been used to assess the fear of falling in the elderly. However, many studies indicate the role of fear of falling in reducing physical activity in individuals. They are called psychological variables that lead to decreased physical activity in the elderly. The environment's needs seem to impose factors that have a psychologically different effect on their daily motor activity.

On the other hand, research results about the elderly over the 61 years: A man in a non-sanatorium. They were different and included only men, but their dash showed a difference between the rates of fear; there is no significant correlation between falls and changes in motor performance measures. The fear of falling is accompanied by increased age further reduces daily activity. They border on the age of onset of fear of falling, and the type of activities in everyday life of the elderly affected by this fear was

not identified. In addition, the results show the relationship between the fear of falling and the elderly balance for it, but; the harmful inverse means whatever it is; the higher the situation, the worse the fear of losing their balance. The probable cause of this contradictory research that could be presently used is the leaf balance test to measure equilibrium. Still, static balance tests are used to measure serenity was located. Other evidence suggests that in addition to the physical and physiological consequences, psychological factors such as fear of falling are also associated with falling. This index is based on the hypothesis that balance is the most significant cause of depression in the Is elderly, and there is a high correlation between loss of balance and falling. The fear of the elderly can lead to excessive care and restrictions on their mobility and independence; Therefore, it seems it comes down to the fact that the fear of falling in the elderly reduces their mobility and balance.

Consequently, it can be said that there is a fear of falling and the balance of the elderly. Regardless of gender, this suggests the lower the balance of the elderly, the greater the fear of falling and the presence of Socializing and performing their daily activities becomes more limited. The balance of a variable seems to be necessary. It can reduce the fear of falling for both sexes. The results, in addition to the link between the fear of falling and the anxiety of the elderly.

The fear of falling causes inactivity and isolation in the elderly and can increase anxiety in the elderly; therefore, stress seems to affect the fear of falling of the elderly. Feeling helpless due to immobility, dependence, isolation, anxiety, loss of independence and feeling the need for care, permanent, is considered another consequence of the fear of falling. It may be accompanied by restlessness, difficulty concentrating or emptying the mind, irritability, muscle tension and sleep disturbance. It should be noted that generalized anxiety disorder is a chronic and joint disorder highly associated with other disorders.

The psychological factors include increased fear, anxiety, stress, depression and decreased self-esteem following ageing and isolation. Isolation could affect the activity and physical performance of the elderly and increase the risk of falling is effective. Fear of falling prevents a high percentage of the elderly from activities. It has become commonplace, and these factors lead to Down Syndrome. It will reduce performance. Given that the elderly, due to fear of falling, reduce their mobility and activity; therefore, anxiety seems to increase the fear of falling becomes elderly.

The article's message is that decreasing balance and falling is a threatening factors for the elderly, increasing the cost of living and maintenance. In addition to the physical, psychological, and social nature of such problems doubles the importance of identifying the factors associated with balance and falling. Based on the results, it is possible (in particular) to link the fear factor of falling with balance and anxiety in the elderly. Predict their behaviour in the environment and adopt appropriate motor and psychological interventions to promote quality of life helped.

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