

**Original Article****Prevalence and Risk Factors of Fear of Fall among Old Age Population of Lahore, Pakistan**Kinza Khalid¹, Nimra Zulfaqar¹, Hira Riaz^{1*} and Mehreen Jabbar¹¹University Institute of Physical Therapy, The University of Lahore, Lahore, Pakistan**ARTICLE INFO****Key Words:**Fear of fall, Old age population, Fall Self efficacy scale¹**How to Cite:**

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***Corresponding Author:**

Hira Riaz
 University Institute of Physical Therapy, The University of Lahore, Lahore, Pakistan
hirariaz305@gmail.com

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ABSTRACT

Falls are one of the most common problems that older people face, and they are a major contributor to their higher morbidity and mortality rates. Anxiety over falling, whether actual or perceived, is the most common description of this condition. **Objective:** To assess prevalence and risk factors of fear of falling among old population in Lahore, Pakistan **Methods:** A cross-sectional study was conducted on 139 old age population. The data was collected on the spot from the University of Lahore teaching hospital and doctor hospital. Data was collected using a non-probability convenient sampling technique. Fall efficacy scale 1 and self-administered questionnaire were used for data collection. **Results:** 64% of the 139 participants were female, while 39.6% were male; 19 (13.7%) were over 80 years old, while 36 (24.9%) were 60 to 69 years old; BMI of 71 (51%) was below normal; and 62 (44.6%) had a history of falling. Fear of falling was expressed by 62.6% of the older population, and it was linked to all risk factors. **Conclusion:** Fear of falling is very common in the old population of Lahore, Pakistan Furthermore age, BMI, and past fall experience were all connected to fear of falling.

INTRODUCTION

Falls are one of the most prevalent issue that aged people face, and they are a major contributor to their higher morbidity and mortality rates. A fall is an accident in which a person falls and comes to a stop on the ground, usually as a result of a combination of internal and external risk factors. Falls and their consequences are the second-leading cause of unintentional injury morbidity. A fall can result in non-traumatic or traumatic injuries, which can range from no injuries, bruises, or lacerations to dislocations, fractures, and brain injuries, as well as death in extreme cases [1-2]. In terms of the number of older adults, Brazil is now placed seventh in the world; by 2025, it is anticipated to be sixth. As falls among older individuals are recurring and complex even [3], caused by many risk factors such as Age, gender, previous falls, fractures, falls other than slips

and trips, recency of a fall, decreased mobility, poor balance test performance, chronic dizziness, higher levels of pain and the use of psychoactive medicines are the most significant risk factors for falls in aged people [4]. In a few retrospective investigations, hypoglycemic medications have been linked as a fall risk factor [5-7]. Another chronic medical condition that increases the chance of falling is osteoarthritis. A person's ability to navigate around things may be impaired by osteoarthritis of the hip or knee. There is also the possibility that postural stability will be compromised if the afflicted leg is tended to be avoided while fully loaded. Falling risk increases with comorbidities, as one may anticipate [5]. Low self-efficacy or low confidence in one's ability to prevent falling is the current definition of fear of falling in current studies. Low

self-efficacy lead people to focus more on the tasks than the obstacles whereas who have high self-efficacy are more likely to develop solutions to overcome their limits [8]. Although the exact causes are unknown, several writers agree on a multifaceted etiology of the fear of falling, which is closely associated to negative aspects such as diminished quality of life, decreased mobility and functionality, increasing frailty, depression, environmental stressors, and institutionalization. Additionally, people with a history of falls and balance disorders are more likely to experience anxiety [9-12]. Some exercises has been shown to reduce the chance of falling such as two approaches to fall prevention have been developed. The first involves exercise, better footwear, and assistive equipment. The second involves adaptations or modifications to the home environment, a review of medication, and greater monitoring by cares. Identifying intrinsic (muscle weakness, neurological impairments, etc.) and extrinsic (bad illumination, unsuitable footwear, etc.) risk factors for falls is an essential and effective preventive strategy [13]. It was shown that older individuals who practiced Tai Chi for 15 weeks had a 47 percent lower relative risk of multiple falls than those who did not [14]. According to researcher's knowledge, there is lack of information regarding prevalence of fear of falling and its risk factors among old population of Lahore. This study would help old people of Pakistan in developing interest in risk factors of fall and decrease its chances by using exercise methods. This study will also encourage further researches on this topic. Therefore, the purpose of the study is to determine the prevalence and risk factors of fear of falling among old population.

METHODS

This study was conducted from Feb 2022 to May 2022 by selecting sample of old population living in Lahore, Pakistan. After IRB approval, the survey was conducted among 139 old population through convenient sampling technique residing in Lahore. The sample size was determined using the percentage formula of sample size estimation with a margin of error of 5%. Data was collected from old population aged between 50 to 80 years, with those who did not meet the criteria being excluded. People who reported neurological or musculoskeletal illnesses, as well as those who had surgical operations within the previous six months, were eliminated. Participants were thoroughly briefed on the testing method. All individuals agreed to participate, were open to additional research, and completed the survey. In the present study, response of 139 participants were recorded through several observations by visiting & interviewing them. Demographic questions about age, gender, BMI, and for fear of fall Self

efficacy 1 questionnaire were included in this survey. Data were analyzed using SPSS 26.0. The frequency and percentage of qualitative variables were reported. Furthermore, the Chi-square analysis was used to determine the relationship between risk factors such as gender, age, and BMI and the fall self-efficacy 1 among old population.

RESULTS

There were 55(39.6%) men and 84(60.4%) women among the 139 old people. Age of 36(25.9%) was 60-69 years, of 49(35.3%) was 50-59 years. BMI of 71(51%) was below normal weight and normal weight was found in 35 people (25.2%). 82 percent of them they had no prior history of falling and no discomfort (Table 1).

Variables	Frequency (%)
Gender	
Male	55(39.6%)
Female	84(60.4%)
Age	
50-59	49(35.3%)
60-69	36(25.9%)
70-79	35(25.2%)
≥80	19(13.7%)
BMI	
Less weight	71(51%)
Normal Weight	35(25.2%)
Overweight	33(23.27%)
Previous History of Fall	
Yes	62(44.6%)
No	82(59%)
Pain	
Yes	57(41%)
No	82(59%)

Table 1: Descriptives of Demographic Data

Out of 139 old people 87(62.59%) had no concern about falling and 87(62.59%) had concern about falling (Figure 1).

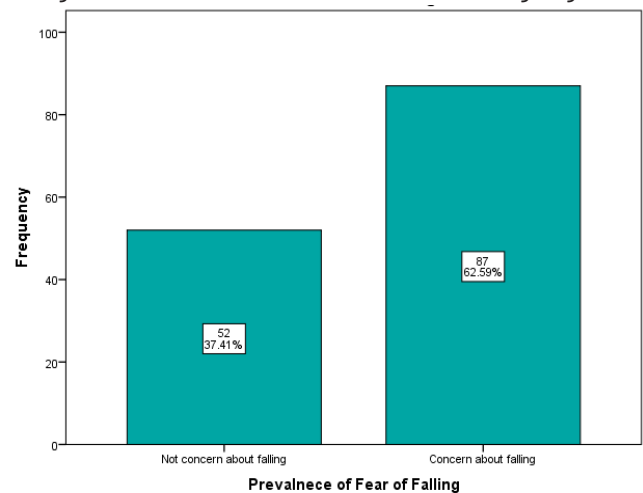


Figure 1: Prevalence of Fear of falling

Out of 139 people, 72 (51.8%) were very concerned when going out for a social function, 61 (43.9%) were very concerned when bathing or showering, and 57(41.0%) were slightly concerned. 62(44.6%) of 139 participants were concerned about getting dressed or undressed, while 60(43.2%) were highly concerned, 55(39.6%) were anxious about getting in and out of a chair, and 65(46.8%) were highly concerned. And 54(38.8%) were apprehensive about getting up or downstairs, while 67(48.2%) were highly concerned. Reaching for something over your head or on the ground worried 53 (38.1%) of 139 participants, while 66(47.5%) were very concerned (Table 2).

Parameter	Not at all concerned 1	Somewhat concerned 2	Fairly concerned 3	Very concerned 4
Cleaning the house (e.g. sweep, vacuum or dust)	7(5%)	15(10.8%)	60(43.2%)	57(41%)
Getting dressed or undressed	5(3.6%)	12(8.6%)	62(44.6%)	60(43.2%)
Preparing simple meals	5(3.6%)	16(11.5%)	16(11.5%)	66(47.5%)
Taking a bath or shower	5(3.6%)	16(11.5%)	57(41.0%)	61(43.9%)
Going to the shop	7(5%)	15(10.8%)	52(37.4%)	65(46.8%)
Getting in or out of a chair	5(3.6%)	14(10.1%)	55(39.6%)	65(46.8%)
Going up or down stairs	7(5%)	11(7.9%)	54(38.8%)	67(48.2%)
Walking around in the neighborhood	6(4.3%)	10(7.2%)	62(44.6%)	61(43.9%)
Reaching for something above your head or on the ground	6(4.3%)	14(10.1%)	53(38.1%)	66(47.5%)
Going to answer the telephone before it stops ringing	6(4.3%)	13(9.4%)	49(35.3%)	71(51.1%)
Walking on a slippery surface (e.g. wet or icy)	8(5.8%)	9(6.5%)	55(39.6%)	67(48.2%)
Visiting a friend or relative	5(3.6%)	11(7.9%)	54(38.8%)	69(49.6%)
Walking in a place with crowds	5(3.6%)	13(9.4%)	51(36.7%)	70(50.4%)
Walking on an uneven surface (e.g. rocky ground, poorly maintained pavement)	7(5%)	11(7.9%)	50(36%)	71(51.1%)
Walking up or down a slope	6(4.3%)	10(7.2%)	53(38.1%)	70(50.4%)
Going out to a social event (e.g. religious service, family gathering or club meeting)	5(3.6%)	12(8.6%)	50(36%)	72(51.8%)

Table 2: Descriptive of Fall Self Efficacy 1

Chi square analysis performed to find out correlation of risk factors with prevalence. According to results previous history of fall, age and BMI had correlation to prevalence of fear of fall among old population as p values were significant .013, .00, .00 respectively. Pain in lumber region and in knee joint on most days during the previous month was categorized as pain had correlation with the prevalence (Table 3).

Variables	p-value
Gender	0.023
Male	
Female	
Age	0.00
50-59	
60-69	
70-79	
≥80	

BMI	
Less weight	.00
Normal Weight	
Overweight	
Previous History of Fall	
Yes	.013
No	
Pain	
Yes	.00
No	

Table 3: Association between risk factors and fall self-efficacy 1

DISCUSSION

The study included 139 old age people with a mean age of 54.32 years. The minimum and maximum ages were 45 and 60, respectively. In the study concern level regarding activities of the daily level was asked by using the fall efficacy scale 1 questionnaire. The result showed that 62.6% (87) had a severe concern of fall while only 37.4% (52) had no major concern of fall. A comparable study performed by Cynthia L. Arken and others concluded that a sample of generally well-resided older people, compared with the reported sample of a pension facility, was common to fear falling. The significant and continuous link between fear and reduced quality of life underlines the importance of public health. This study employed a self-administered and geriatric depression scale questionnaire to evaluate fear of fall among the elderly [15]. Lopes KT and colleagues found in a further investigation that most individuals were afraid of falling irrespective of fall history. Only 54.42 percent had reported an event of fall among those who were afraid to drop (90.48 percent) in at least an FES-I-BRAZIL-scale assignment. This study employed FES-I-BRAZIL to evaluate the fear of falls, in contrast to the current study. Even elderly individuals with no history of falls might be afraid of falling [11]. Other studies indicate that fear of fall fluctuates from 20 percent to 85 percent among the elderly population [12, 16]. The fear of falling was characterized as being independent of prior experience with falling, and the increase in fear of falling after a fall is tied to the fall itself rather than the fall itself. According to Salked et al., falls that result in severe injuries significantly increase anxiety; the history of falls is viewed as a critical risk factor for dread [17]. Most studies identify ageing as a risk factor for falling fear, saying that advanced age is related with a loss of functional reserve and that the perception of these losses can lead to a low sense of self-efficacy and a fear of falling [15, 17-20].

CONCLUSION

Fear of falling is very common in the old population of Lahore, Pakistan. Furthermore age, BMI, and past fall experience were all correlated to fear of falling.

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