

ASSOCIATION BETWEEN FEAR OF FALL AND FUNCTIONAL STATUS IN ELDERLY POPULATION

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ABSTRACT

This cross-sectional study was conducted over six months in various settings across Lahore, including community centers, outpatient clinics, and residential care facilities, to assess the association between fear of falling and functional ability among older adults. A total of 117 elderly individuals aged 60 years and above were selected using non-probability convenient sampling, as determined through Cochran's formula. Participants were eligible if they could ambulate independently or with assistive devices and reported fear of falling, measured using the Falls Efficacy Scale-International (FES-I). Individuals with severe cognitive impairment, acute medical illness, neurological or musculoskeletal disorders, psychiatric illness, or major sensory deficits were excluded. Data were analyzed using SPSS version 25. Descriptive statistics were used for demographic variables, and Chi-Square analysis was applied to assess the relationship between fear of falling and functional ability. The results showed a statistically significant relationship between FES-I and FAQ5 scores ($r = -0.370$, $p < 0.01$), indicating that as fear of falling increased, functional ability decreased. The mean FES-I score was 38.26 (SD = 9.80), reflecting moderate to high fear levels, while the mean FAQ5 score was 12.04 (SD = 3.80), indicating moderate limitations in physical function. These findings underscore the importance of addressing fall-related fears to preserve functional independence in the elderly.

Key Words

Fear of fall, Functional Status, Elderly Population, fall efficacy

INTRODUCTION

The global population is aging rapidly, and by 2050, individuals aged 65 and above will represent nearly 16% of the world's population (WHO, 2021). Aging is accompanied by physiological and

psychological changes that increase vulnerability to functional decline, with falls being a major cause of morbidity, reduced independence, and mortality in older adults (Gambaro et al., 2022). Fear of falling (FoF) is highly prevalent among

older adults, occurring in both those who have experienced falls and those who have never fallen (MacKay et al., 2021). FoF is not only a psychological response but also a predictor of future falls and functional deterioration (Delbaere et al., 2010). It often leads to activity restriction, social withdrawal, and reduced physical performance in community-dwelling older people (de Souza et al., 2022).

Functional status, defined as the ability to carry out activities of daily living (ADLs) and instrumental activities of daily living (IADLs), is essential for maintaining independence in older adults. The Disablement Process Model explains how chronic conditions lead to impairments, limitations, and ultimately disability, influenced by both personal and environmental factors (de Souza et al., 2022). Impaired functional status increases the risk of institutionalization and reduced quality of life. Screening older adults for FoF, anxiety, and depression is recommended, as these factors contribute to activity restriction and fall risk (Painter et al., 2012). With rising life expectancy globally, concerns such as reduced mobility, fall risk, and psychological stressors are becoming more common (WHO, 2021), further emphasizing the importance of understanding FoF (Lee & Tak, 2023).

FoF is influenced by balance impairments, frailty, previous falls, and emotional distress (Delbaere et al., 2010). Its prevalence ranges widely, from 20% to 85%, depending on assessment tools and population characteristics (Yardimci et al., 2021). Excessive fear leads to physical inactivity, reduced confidence, and deconditioning, which creates a progressive cycle of declining function. Evidence from longitudinal studies indicates that falls and FoF reinforce each other, increasing disability risk (Yardimci et al., 2021).

Functional status in older adults is commonly assessed through ADLs, IADLs, and physical performance tests. These tools have been validated for evaluating disability progression, recovery patterns, and risk of mortality and nursing home admission (Akosile et al., 2021). Performance tests—including gait speed, balance tasks, and strength assessments—provide valuable information about functional capacity and help

identify individuals at high risk of functional decline (Shao et al., 2022).

Previous studies show a strong relationship between FoF and functional limitations. High FoF is associated with reduced mobility, decreased social engagement, and poorer physical performance. Activity restriction due to fear has been reported in up to one-third of older adults, and predictors include age, female gender, and fall history (Mendes da Costa et al., 2012). In addition, more than half of community-dwelling elderly individuals report fear of falling, and many limit daily activities as a result (Fucahori et al., 2014). FoF can also lead to psychological consequences such as depression and reduced quality of life, particularly in frail older individuals (Alcolea-Ruiz et al., 2021).

Despite the strong evidence linking FoF and functional decline, FoF remains under-recognized in routine geriatric assessment. Effective interventions such as physiotherapy, balance training, cognitive-behavioral therapy, and environmental modification have shown positive outcomes in reducing FoF and improving functional performance (Alcolea-Ruiz et al., 2021). Screening tools such as FES-I and SQ-FAR are useful for detecting at-risk individuals and predicting disability progression (Belloni et al., 2021).

Given the high prevalence and clinical importance of FoF and its significant impact on independence, mobility, and psychosocial wellbeing, it is essential to understand how FoF relates to functional status. Therefore, this study aims to investigate the association between fear of falling and functional status in the elderly population.

AIMS AND OBJECTIVE

The Aims and objective of this study is:

- To assess the association between fear of fall and functional status in elderly population.

HYPOTHESIS

Null Hypothesis (H_0): There is no significant association between fear of fall and functional status in elderly population.

Alternate Hypothesis (H_1): There is a significant association between fear of fall and functional status in elderly population.

Review of Literature:

Recent research across multiple regions consistently demonstrates that fear of falling (FoF) is a major concern among older adults, strongly linked with functional decline, frailty, and fall risk. Studies also show that FoF is influenced by sensory processing, psychological factors, and chronic health conditions, making it a multidimensional geriatric issue.

Cemali et al. (2025) examined older adults with hypertension and normotension and found significant differences in sensory processing, kinesiophobia, and FoF between groups. Their findings highlight that vestibular and visual processing impairments, more common in hypertensive individuals, may elevate FoF levels (Cemali et al., 2025). Similarly, a large systematic review by Vo et al. (2023) conducted across Southeast Asian populations reported FoF prevalence ranging from 21.6% to 88.2%, with female gender, advanced age, balance impairment, and fall history being the most consistent predictors. They also noted that nearly all intervention studies focused on exercise-based programs, indicating limited exploration of environmental or psychosocial factors (Vo et al., 2023).

International evidence continues to strengthen these associations. Wang et al. (2022) demonstrated that FoF showed a stronger association with cognitive and balance measures—particularly Clock Drawing Test (CDT) performance and TUG scores—compared to other domains, suggesting that visuospatial processing and mobility are major determinants of FoF (Wang et al., 2022). Likewise, de Souza et al. (2022) synthesized data from 6,294 older adults and confirmed that FoF significantly increases the risk of frailty, with adjusted odds ratios reaching as high as 9.87 in longitudinal analyses, reinforcing FoF as both a predictor and consequence of physiological decline (de Souza et al., 2022).

Longitudinal research by Asai et al. (2022) showed that FoF significantly predicted fall occurrence,

especially among older adults with a history of multiple falls. Their one-year cohort study reported a rate ratio of 13.60 for multiple fallers, demonstrating the strong interaction between past falls and future risk. Similarly, Gambaro et al. (2022) linked late-life depression with increased falls, although their meta-analysis revealed inconsistent associations, suggesting that depression contributes to—but does not solely determine—FoF and fall risk (Gambaro et al., 2022).

Studies from rural and urban populations further highlight the widespread impact of FoF. Su et al. (2021) reported a 22.8% prevalence of FoF among rural Chinese elders, with significant associations with fall history and poorer physical function (Su et al., 2021). Likewise, Öztürk et al. (2021) found FoF prevalence at 44.6% among Turkish older adults and identified strong links with anxiety, ADL limitations, and female gender (Bahat Öztürk et al., 2021). Their results align with Akosile et al. (2021), who found that assisted-living residents exhibited significantly higher FoF and lower physical activity than community-dwelling older adults, emphasizing the role of environmental and lifestyle differences (Akosile et al., 2021).

Research has also explored the effects of FoF on balance and dual-task performance. Sapmaz and Mujdeci (2021) found significant impairments in Berg Balance Scale, TUG, and POMA scores among older adults with FoF, along with reduced physical activity and quality of life (Sapmaz & Mujdeci, 2021). MacKay et al. (2021) further supported these findings through a scoping review, identifying older age, female gender, previous falls, poor physical performance, and depressive symptoms as the most consistent predictors of FoF (MacKay et al., 2021).

Frailty-focused studies demonstrate similar trends. Martínez-Arnau et al. (2021) reported higher FoF among women, fallers, and those with depressive symptoms, while better gait and independence in ADLs predicted lower FoF (Martínez-Arnau et al., 2021). Likewise, Liu et al. (2021) found that FoF independently predicted limitations in daily activities, equating its importance to that of multiple falls.

Cognitive function also plays a meaningful role. Langeard et al. (2021) found cognitive impairments—especially visuospatial deficits—to be stronger identifiers of fallers than mobility alone in older adults with FoF (Langeard et al., 2021). Similarly, Chen et al. (2021) demonstrated that experiencing a fall in the past month or year significantly increased the likelihood of FoF, even after adjusting for functional and demographic factors (Chen et al., 2021).

Overall, the collective evidence highlights that fear of falling is a widespread and multifactorial condition affected by sensory, cognitive, psychological, and mobility-related factors. Studies consistently emphasize that FoF contributes to functional decline, reduced activity, frailty, and increased fall risk, underscoring the need for comprehensive assessment and multifaceted intervention approaches for older adults.

Methodology

This cross-sectional study was conducted over six months in various settings across Lahore, including community centers, outpatient clinics, and residential care facilities, where a sufficient number of elderly individuals can be accessed. A sample of 117 participants were determined using Cochran's formula and selected through a non-probability convenient sampling technique. The inclusion criteria consist of individuals aged 60 years and above, living independently or in care settings, who are able to walk with or without assistive devices, and who report a fear of falling as assessed by the Falls Efficacy Scale- International (FES-I). Exclusion criteria included those with severe cognitive impairment, acute medical illness or recent hospitalization, neurological or musculoskeletal disorders, psychiatric conditions, or significant sensory impairments. Data was collected using the FES-I and the Physical Functional Ability Questionnaire (FAQ5). Statistical analysis was performed using SPSS version 25, with demographic data presented as means and standard deviations. The study aims to evaluate the association between fear of falling and functional status in the elderly population of Lahore.

Study Design

Cross-sectional study design was used.

Study Setting

The study setting is Hospitals and old age homes in Lahore.

Study Duration

The study duration was 6 months after synopsis approval

Sample Size

Sample size of 117 was determined by using the Cochran formula.

Sampling Technique

Non-Probability Convenient Sampling technique was used (Nawaz et al., 2022).

Sampling Assortment Criteria

Inclusion Criteria

- Age 60 years and above (Cacchione, 2022).
- Includes those living independently, with families, or in care facilities (Delbaere et al., 2010).
- Includes those who have Ability to walk with or without assistive devices (Scheffer et al., 2008).
- Fear of Falling Present (as assessed by a validated scale like FES-I) (Delbaere et al., 2010).

Exclusion Criteria

- Individuals with severe cognitive impairment (Friedman et al., 2002).
- Individuals with acute medical illness or recent hospitalization within past month (Tinetti et al., 1988).
- Individuals with neurological or musculoskeletal disorders (Ambrose et al., 2013).
- Individuals with current psychiatric illness (e.g., severe depression, psychosis) (Friedman et al., 2002).
- Individuals with Severe visual or hearing impairments (Howland et al., 1998).

Statistical Analysis

The statistical analysis was performed using SPSS version 25, demographic data had been shown as mean and standard deviation.

Outcome Measurement Tool

- Falls Efficacy Scale-International
- Physical Functional Ability Questionnaire (FAQ5)

Data Collection Procedure

A cross-sectional study design was used to collect data from participants. Eligible participants was recruited from different place where a sufficient number of elderly individuals can be access, either from the community, clinics, or residential facilities of Lahore. After obtaining informed consent, participants was completed a questionnaires, Falls Efficacy Scale-International and Physical Functional Ability Questionnaire (FAQ5) was utilized. Data was analyzed to find the association between fear of fall and functional status in elderly population.

Parameters of Study

1. Age
2. Gender
3. Fear of Falling
4. Functional Status
5. Use of assistive devices

Age

The aging process is usually accompanied by loss of muscle mass and strength, as well as a decline in physical functioning due to many physiological, psychological, and sociological changes; second, the cognitive function of older adults gradually declines with brain aging; and declines in vision, hearing, and proprioceptive senses with ageing may be related to the development of FOF in older adults. (Zhang et al., 2023)

Gender

Gender plays a key role, with women generally reporting higher levels of fear. Other contributing factors include poor health, decreased mobility, environmental hazards, social isolation, and psychological issues like anxiety and depression, all of which are often more pronounced in women. (Birhanie et al., 2021)

Fear of Falling

Fear of falling (FOF) is a common concern among older adults, limiting daily activities and leading to physical and social decline. It is linked to factors like age, gender, poor health, and previous falls, with significant impacts on quality of life and independence. (Birhanie et al., 2021)

Functional Status

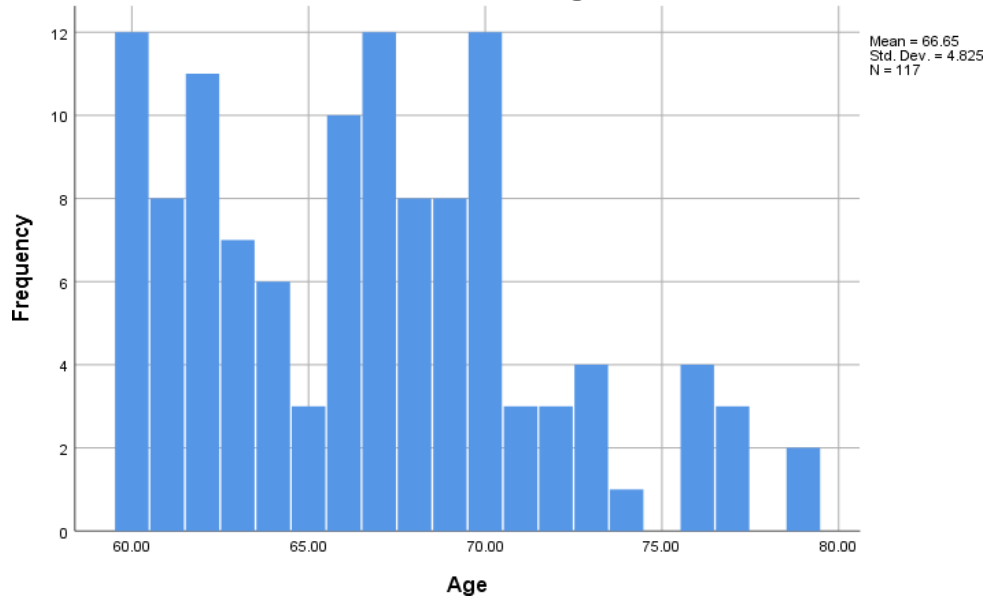
Functional status in older adults refers to their ability to perform daily activities, which can be significantly impacted by fear of falling (FOF). FOF often leads to reduced mobility, activity avoidance, and changes in gait, which can impair physical function and independence. This decline in functional status can result in further disability, social isolation, and increased risk of future falls, negatively affecting the overall quality of life in older adults. (Zhang et al., 2023)

Use of Assistive Devices

Assistive devices are commonly used by older adults to enhance stability and prevent falls. While helpful, excessive reliance on these devices may limit mobility and contribute to further functional decline. (Zhang et al., 2023)

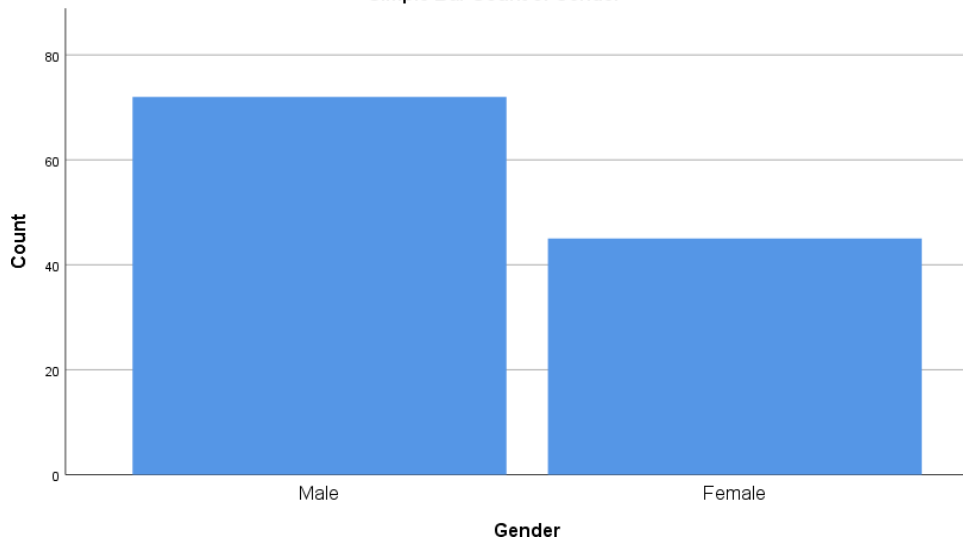
RESULTS

Age Distribution of Participants Histogram



The age histogram peaks between 60 and 70 years, tapering off through the 70s, reflecting our sample's mean age of 66.7 ± 4.8 years (range 60–79); this clustering around the mid-60s explains the tallest bars in that bin, while the progressively shorter bars beyond 70 illustrate the right-skewed tail.

Gender Distribution of Participants Simple Bar Count of Gender



This chart shows that the number of male participants (approximately 72) is significantly

higher than the number of female participants (around 45), indicating a gender imbalance in the

study sample, with males making up the majority.

Descriptive Statistics of Physical Functional Ability Questionnaire (FAQ-5)

Statistics

FAQ5_Score

N	Valid	117
	Missing	0
Mean		60.2137
Median		55.0000
Std. Deviation		18.98721
Variance		360.514

The statistical summary of the FAQ5 (Physical Functional Ability Questionnaire) scores from 117 participants shows that the mean score was 60.21, with a median of 55, indicating that half the participants scored below 55 and half above. The standard deviation is 18.99, suggesting a wide variability in physical functional ability across the

sample. The variance of 360.51 reinforces this spread. These results suggest that while the average functional ability is moderate, individual scores vary considerably, indicating diverse levels of physical function among the elderly participants.

Self care Ability assessment

Frequency	Percent	Valid Percent	Cumulative Percent
Valid Require total care - for bathing, toilet, dressing, moving and eating 27	23.1	23.1	23.1
Require frequent assistance 31	26.5	26.5	49.6
Require occasional assistance 33	28.2	28.2	77.8
Independent with self-care 26	22.2	22.2	100.0
Total 117	100.0	100.0	

The self-care ability assessment among 117 participants reveals a varied distribution of dependency levels. About 23.1% of individuals required total care for basic activities such as bathing, toileting, dressing, moving, and eating, while 26.5% needed frequent assistance. The largest proportion, 28.2%, reported requiring occasional assistance, and 22.2% were fully

independent in self-care. These findings suggest that while a small portion of the population maintains full independence, the majority experience some level of dependency, highlighting the need for tailored support strategies to enhance functional autonomy in the elderly.

Movement ability assessment

Frequency		Percent	Valid Percent	Cumulative Percent
Valid	Able to get up and walk with assistance, unable to climb stairs	25	21.4	21.4
	Able to get up and walk independently, able to climb one flight of stairs	34	29.1	50.4
	Able to walk short distances and climb more than one flight of stairs	35	29.9	80.3
	Able to walk long distances and climb stairs without difficulty	23	19.7	100.0
Total		117	100.0	100.0

The movement ability assessment of 117 participants shows a range of mobility capacities. About 21.4% could only get up and walk with assistance and were unable to climb stairs, indicating significant mobility limitations. 29.1% were independent walkers but could only manage one flight of stairs, while 29.9% were able to walk short distances and climb multiple flights, reflecting moderate mobility. Lastly, 19.7%

demonstrated full mobility, being able to walk long distances and climb stairs without difficulty. These findings indicate that while a substantial portion maintains moderate to good mobility, a notable percentage requires assistance or faces limitations, emphasizing the importance of physical support and targeted interventions.

Family and social ability assessment

Frequency		Percent	Valid Percent	Cumulative Percent
Valid	Unable to perform any - chores, hobbies, driving, sex and social activities	13	11.1	11.1
	Able to perform some	47	40.2	51.3
	Able to perform many	38	32.5	83.8
	Able to perform all	19	16.2	100.0
Total		117	100.0	100.0

The family and social ability assessment among 117 participants reveals varying levels of

engagement in daily and social activities. 11.1% of individuals were unable to perform any such as

chores, hobbies, driving, sex, or social interactions, indicating severe functional limitations. The majority, 40.2%, were able to perform some of these activities, and 32.5% managed to perform many, reflecting moderate to good social functioning. Only 16.2% were fully independent, capable of engaging in all listed activities. This

distribution highlights a significant portion of the population facing partial to complete restrictions in family and social roles, underscoring the need for supportive interventions to improve overall quality of life.

Lifting ability assessment

Frequency		Percent	Valid Percent	Cumulative Percent
Valid	Able to lift up to 10# occasionally	51	43.6	43.6
	Able to lift up to 20# occasionally	42	35.9	79.5
	Able to lift up to 50# occasionally	16	13.7	93.2
	Able to lift over 50# occasionally	8	6.8	100.0
	Total	117	100.0	100.0

The lifting ability assessment of 117 participants shows that the majority had limited lifting capacity. Specifically, 43.6% were only able to lift up to 10 pounds occasionally, and 35.9% could lift up to 20 pounds, suggesting restricted physical strength or function. A smaller proportion, 13.7%, managed to lift up to 50 pounds, while

only 6.8% could lift more than 50 pounds occasionally, indicating higher physical capacity. These results reflect that most individuals in this group face moderate to significant limitations in lifting ability, which may affect their daily and occupational functioning.

Work ability assessment

Frequency		Percent	Valid Percent	Cumulative Percent
Valid	Unable to do any work	9	7.7	7.7
	Able to work part-time and with physical limitations	47	40.2	47.9
	Able to work part-time or with physical limitations	32	27.4	75.2
	Able to perform normal work	29	24.8	100.0
	Total	117	100.0	100.0

The work ability assessment among 117 participants indicates varying levels of

occupational capacity. 7.7% were completely unable to do any work, highlighting severe

limitations. The largest group, 40.2%, could work part-time and with physical limitations, while 27.4% could either work part-time or with physical limitations, reflecting moderate impairments. Only 24.8% were able to perform normal work without restrictions. These findings suggest that a

significant proportion of individuals experience work-related functional limitations, emphasizing the need for tailored vocational support and rehabilitation strategies.

Falls Efficacy Scale - International

Statistics

FESI_Score

N	Valid	117
	Missing	0
Mean		38.2564
Median		39.0000
Std. Deviation		9.79633
Variance		95.968

The analysis of the Falls Efficacy Scale International (FES-I) scores among 117 participants showed a mean score of 38.26, a median of 39, and a standard deviation of 9.80, indicating moderate overall fear of falling in the sample. Given that higher FES-I scores reflect greater fear, the central tendency around 38–39

suggests a notable concern about falling during daily activities among participants. The relatively moderate spread (variance ≈ 96) implies some variability in fear levels across individuals, but not extreme. These findings underline the importance of fall prevention strategies in this population.

Cleaning the house (e.g. sweep, vacuum, dust)

Frequency			Percent	Valid Percent	Cumulative Percent
Valid	Not at all concerned	48	41.0	41.0	41.0
	Somewhat concerned	31	26.5	26.5	67.5
	Fairly concerned	24	20.5	20.5	88.0
	Very concerned	14	12.0	12.0	100.0
	Total	117	100.0	100.0	

This table shows that participants' levels of concern regarding cleaning the house (e.g., sweeping, vacuuming, dusting) varied in intensity. The largest proportion of participants (41.0%) reported being not at all concerned, indicating that household cleaning tasks may not be a major worry for many. A smaller segment (26.5%) were somewhat concerned, while 20.5% were fairly

concerned, and only 12.0% were very concerned. Cumulatively, 59% expressed at least some level of concern. These findings suggest that although a significant number of individuals do express concern to some extent, overall concern levels about household cleaning remain relatively low in this population.

Getting dressed or undressed

Frequency			Percent	Valid Percent	Cumulative Percent
Valid	Not at all concerned	40	34.2	34.2	34.2
	Somewhat concerned	27	23.1	23.1	57.3
	Fairly concerned	27	23.1	23.1	80.3
	Very concerned	23	19.7	19.7	100.0
	Total	117	100.0	100.0	

This table shows that concern levels regarding the activity of getting dressed or undressed were more evenly distributed compared to other tasks. While 34.2% of participants were not at all concerned, a notable portion expressed varying degrees of concern: 23.1% were somewhat concerned, another 23.1% were fairly concerned, and 19.7% were very concerned. This means that 65.8% of

participants experienced at least some level of concern related to dressing activities. These results suggest that dressing and undressing, as basic daily living tasks, may present moderate functional challenges or psychological discomfort for a considerable portion of individuals in the sample.

Preparing simple meals

Frequency			Percent	Valid Percent	Cumulative Percent
Valid	Not at all concerned	41	35.0	35.0	35.0
	Somewhat concerned	35	29.9	29.9	65.0
	Fairly concerned	24	20.5	20.5	85.5
	Very concerned	17	14.5	14.5	100.0
	Total	117	100.0	100.0	

This table shows that participants reported varying levels of concern when it came to preparing simple meals. 35.0% of respondents were not at all concerned, while 29.9% were somewhat concerned, indicating that over half of the sample (64.9%) experienced little to moderate concern. However, 20.5% reported being fairly concerned, and 14.5% were very concerned, showing that a

substantial minority faced notable challenges with this activity. Overall, these findings suggest that while meal preparation is not a major concern for most participants, a significant portion still experiences difficulties or apprehension in performing this daily task.

Taking a bath or shower

Frequency			Percent	Valid Percent	Cumulative Percent
Valid	Not at all concerned	30	25.6	25.6	25.6
	Somewhat concerned	29	24.8	24.8	50.4
	Fairly concerned	28	23.9	23.9	74.4

Very concerned	30	25.6	25.6	100.0
Total	117	100.0	100.0	

This table shows that participants' concerns about taking a bath or shower were distributed almost evenly across all levels. 25.6% of individuals reported being not at all concerned, while an equal proportion (25.6%) were very concerned, indicating a polarized pattern. Additionally, 24.8% were somewhat concerned and 23.9% were

fairly concerned. These findings suggest that bathing or showering poses significant concern for nearly three-quarters of the participants (74.4%), with a considerable portion experiencing high levels of difficulty or discomfort. This activity may represent a more sensitive or physically demanding aspect of daily living for the sample group.

Going to the shop

Frequency		Percent	Valid Percent	Cumulative Percent
Valid	Not at all concerned	37	31.6	31.6
	Somewhat concerned	30	25.6	57.3
	Fairly concerned	32	27.4	84.6
	Very concerned	18	15.4	100.0
	Total	117	100.0	

This table shows that concern levels regarding going to the shop were moderately spread across the sample. 31.6% of participants reported being not at all concerned, while 25.6% were somewhat concerned, and 27.4% were fairly concerned. Additionally, 15.4% of respondents were very concerned about this task. These findings indicate

that although a third of the participants felt confident going to the shop without concern, a notable 68.4% experienced at least some level of concern. This suggests that shopping may pose mild to moderate challenges for a significant portion of individuals in this population.

Getting in or out of a chair

Frequency		Percent	Valid Percent	Cumulative Percent
Valid	Not at all concerned	24	20.5	20.5
	Somewhat concerned	46	39.3	59.8
	Fairly concerned	28	23.9	83.8
	Very concerned	19	16.2	100.0
	Total	117	100.0	

This table shows that concern levels regarding getting in or out of a chair were noticeably higher among participants. Only 20.5% reported being not at all concerned, while the majority expressed some level of concern: 39.3% were somewhat concerned, 23.9% were fairly concerned, and 16.2% were very

concerned. Cumulatively, 79.5% of participants experienced at least mild concern with this basic mobility task

Going up or down stairs

Frequency			Percent	Valid Percent	Cumulative Percent
Valid	Not at all concerned	13	11.1	11.1	11.1
	Somewhat concerned	38	32.5	32.5	43.6
	Fairly concerned	44	37.6	37.6	81.2
	Very concerned	22	18.8	18.8	100.0
	Total	117	100.0	100.0	

This table shows that participants expressed relatively high concern about going up or down stairs. Only 11.1% reported being not at all concerned, while 32.5% were somewhat concerned, 37.6% were fairly concerned, and 18.8% were very concerned. In total, 88.9% of respondents experienced at least some level of concern with this

mobility task. These findings suggest that stair navigation is a significant challenge for the majority of participants, likely reflecting issues related to physical endurance, balance, or musculoskeletal limitations.

Walking around in the neighbourhood

Frequency			Percent	Valid Percent	Cumulative Percent
Valid	Not at all concerned	38	32.5	32.5	32.5
	Somewhat concerned	38	32.5	32.5	65.0
	Fairly concerned	34	29.1	29.1	94.0
	Very concerned	7	6.0	6.0	100.0
	Total	117	100.0	100.0	

This table shows that concern levels about walking around in the neighbourhood were relatively balanced, with 32.5% of participants reporting being not at all concerned and an equal 32.5% being somewhat concerned. Additionally, 29.1%

were fairly concerned, while only 6.0% were very concerned. Overall, 67.5% of respondents experienced at least mild concern with this outdoor mobility activity.

Reaching for something above your head or on the ground

Frequency			Percent	Valid Percent	Cumulative Percent
Valid	Not at all concerned	24	20.5	20.5	20.5
	Somewhat concerned	37	31.6	31.6	52.1
	Fairly concerned	40	34.2	34.2	86.3
	Very concerned	16	13.7	13.7	100.0
	Total	117	100.0	100.0	

This table shows that participants experienced a

moderate to high level of concern when reaching

for objects either above their head or on the ground. Only 20.5% reported being not at all concerned, while the remaining 79.5% expressed some level of concern: 31.6% were somewhat

concerned, 34.2% were fairly concerned, and 13.7% were very concerned.

Going to answer a telephone before it stops ringing

Frequency			Percent	Valid Percent	Cumulative Percent
Valid	Not at all concerned	39	33.3	33.3	33.3
	Somewhat concerned	30	25.6	25.6	59.0
	Fairly concerned	35	29.9	29.9	88.9
	Very concerned	13	11.1	11.1	100.0
	Total	117	100.0	100.0	

This table shows that participants reported varying levels of concern about going to answer a telephone before it stops ringing. 33.3% were not at all concerned, 25.6% were somewhat concerned, 29.9% were fairly concerned, and 11.1% were very

concerned. Cumulatively, 66.7% of participants expressed at least some level of concern with this task.

Walking on a slippery surface

Frequency			Percent	Valid Percent	Cumulative Percent
Valid	Not at all concerned	17	14.5	14.5	14.5
	Somewhat concerned	34	29.1	29.1	43.6
	Fairly concerned	41	35.0	35.0	78.6
	Very concerned	25	21.4	21.4	100.0
	Total	117	100.0	100.0	

This table shows that concern levels were relatively high when it came to walking on a slippery surface. Only 14.5% of participants reported being not at all concerned, while 29.1% were somewhat concerned, 35.0% were fairly concerned, and

21.4% were very concerned. In total, 85.5% expressed at least some level of concern with this task.

Visiting a friend or relative

Frequency			Percent	Valid Percent	Cumulative Percent
Valid	Not at all concerned	36	30.8	30.8	30.8
	Somewhat concerned	31	26.5	26.5	57.3
	Fairly concerned	32	27.4	27.4	84.6
	Very concerned	18	15.4	15.4	100.0

Total	117	100.0	100.0	
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This table shows that participants exhibited a range of concern levels regarding visiting a friend or relative. 30.8% reported being not at all concerned, while 26.5% were somewhat concerned, 27.4% were fairly concerned, and 15.4% were very

concerned. Overall, 69.2% of participants expressed at least some degree of concern with this social activity.

Walking in a place with crowds

Frequency		Percent	Valid Percent	Cumulative Percent
Valid	Not at all concerned	29	24.8	24.8
	Somewhat concerned	37	31.6	56.4
	Fairly concerned	34	29.1	85.5
	Very concerned	17	14.5	100.0
	Total	117	100.0	100.0

This table shows that participants reported moderate levels of concern when walking in crowded places. 24.8% were not at all concerned, while 31.6% were somewhat concerned, 29.1% were fairly concerned, and 14.5% were very concerned. In total, 75.2% of respondents experienced at least some level of concern with this activity.

Frequency		Percent	Valid Percent	Cumulative Percent
Valid	Not at all concerned	18	15.4	15.4
	Somewhat concerned	34	29.1	44.4
	Fairly concerned	34	29.1	73.5
	Very concerned	31	26.5	100.0
	Total	117	100.0	100.0

Walking on an uneven surface (rocky ground, poorly maintained pavement)

This table shows that participants expressed high levels of concern when walking on an uneven surface such as rocky ground or poorly maintained pavement. Only 15.4% reported being not at all concerned, while 29.1% were somewhat concerned,

another 29.1% were fairly concerned, and 26.5% were very concerned. Altogether, 84.6% of participants experienced at least some level of concern with this task.

Walking up or down a slope

Frequency		Percent	Valid Percent	Cumulative Percent
Valid	Not at all concerned	16	13.7	13.7
	Somewhat concerned	34	29.1	42.7
	Fairly concerned	38	32.5	75.2
	Very concerned	29	24.8	100.0
Total		117	100.0	100.0

This table shows that participants reported relatively high concern levels regarding walking up or down a slope. Only 13.7% were not at all concerned, while 29.1% were somewhat concerned, 32.5% were fairly concerned, and 24.8% were very concerned. Overall, 86.3% of participants expressed at least some level of concern with this activity.

Frequency			Percent	Valid Percent	Cumulative Percent
Valid	Not at all concerned	36	30.8	30.8	30.8
	Somewhat concerned	28	23.9	23.9	54.7
	Fairly concerned	31	26.5	26.5	81.2
	Very concerned	22	18.8	18.8	100.0
Total		117	100.0	100.0	

Going out to a social event (e.g. religious service, family gathering, or club meeting)

This table shows that participants had varying levels of concern about going out to social events such as religious services, family gatherings, or club meetings. 30.8% reported being not at all concerned, 23.9%

were somewhat concerned, 26.5% were fairly concerned, and 18.8% were very concerned. In total, 69.2% of participants expressed at least some level of concern with engaging in social outings.

**Cross-Tabulation of FES-I and FAQ-5
Functional Status * Fear of Fall Crosstabulation**

Fear of Fall		Count	Moderate Fear of Fall	High Fear of Fall	Total
Severe Impairment	Moderate Impairment				
Functional Status	Severe Impairment	1	13	24	38
	Moderate Impairment	7	35	27	69
	High Functional Status	3	5	2	10
Total		11	53	53	117

This table shows that there is a noticeable association between functional status and levels of

fear of falling. Among those with severe impairment, the majority had a high fear of fall (24 out of 38), followed by moderate fear (13 participants), and only 1 participant had a low fear. Participants with moderate impairment were most commonly associated with moderate fear of fall (35 out of 69), while 27 had high fear and 7 had low fear. In

Description of Chi-Square Table

Chi-Square Tests

Value		df	Asymptotic Significance (2-sided)
Pearson Chi-Square	12.603 ^a	4	.013
Likelihood Ratio	11.864	4	.018
Linear-by-Linear Association	11.170	1	.001
N of Valid Cases	117		

This table shows that a statistically significant association was found between functional status and fear of fall. The Pearson Chi-Square value was 12.603 with 4 degrees of freedom and a p-value of .013, indicating a significant relationship at the 0.05 level. Similarly, the Likelihood Ratio was also significant ($p = .018$). The Linear-by-Linear Association value of 11.170 with a p-value of .001 further suggests a strong linear trend, indicating that as functional status decreases, the fear of falling increases. These findings confirm a meaningful association between the two variables in the sample of 117 participants.

Discussion:

Our study revealed a statistically significant relationship between fear of falling and functional ability among elderly participants ($p = .018$). This suggests that as fear of falling increases, the ability to perform physical and daily tasks decreases. The mean FESI score was 38.26 (SD = 9.80), indicating a moderate to high concern about falling, while the mean functional ability score (FAQ5) was 60.21 (SD = 18.98), reflecting moderate limitations in physical function. These results confirm that fear of falling not only affects psychological well-being but also translates into measurable reductions in

contrast, individuals with high functional status showed mostly low (3) or moderate fear (5), and only 2 reported a high fear of fall. These results suggest that as functional impairment increases, the fear of falling tends to increase as well.

physical capability.

Similar to the previous study, which involved 105 elderly participants, 61% of whom reported fear of falling, our findings also showed a high prevalence of fear and a clear association with poorer functional outcomes. The earlier study demonstrated that fearful older adults performed significantly worse on objective physical function measures such as the Berg Balance Scale (BBS), Short Physical Performance Battery (SPPB), gait speed, and Timed Up & Go (TUG) test ($p < 0.05$). Both studies highlight that fear of falling is closely linked with lower balance, slower mobility, and reduced physical confidence. Moreover, the predictive strength of the BBS in the previous study (c-statistic = 0.757) supports the observed relationship between psychological fear and physical performance found in our data (Huang et al., 2022).

Similar to recent studies which show a significant association between functional decline and increased fear of falling, our study also revealed a statistically meaningful relationship between these variables. In our sample, individuals with severe impairment exhibited higher levels of fear, while those with better functional status reported lower fear levels. This aligns with findings from a review

that included 10 studies involving 6,294 older adults, where adjusted odds ratios ranged up to 9.87 in longitudinal analyses and 7.16 in cross-sectional studies, indicating a strong correlation between reduced functional ability and greater fear of falling. These consistent patterns across studies emphasize the critical role of functional capacity in influencing fall-related anxiety among older populations (de Souza et al., 2022).

Similar to previous literature which show that fear of falling (FOF) is significantly associated with reduced physical activity (PA) and quality of life (QOL), our study also demonstrated a significant relationship between functional status and FOF. In the referenced study, participants from assisted-living facilities (ALFs) showed significantly lower PA and QOL scores compared to community-dwelling older adults, and FOF was notably more prevalent in the ALF group ($p < 0.05$). Likewise, our findings revealed that individuals with severe functional impairment were more likely to report high levels of fear of falling, while those with better functional status had lower FOF levels (Akosile et al., 2021). Similarly, a recent study also found a significant association between functional status and fear of falling (FOF). In that study, the Pearson Chi-Square value was 12.603 ($p = 0.013$), and the Linear-by-Linear Association showed a value of 11.170 ($p = 0.001$), indicating a strong relationship between declining functional status and increasing FOF. Additionally, the study identified ADL limitations as a significant predictor of FOF, with an odds ratio (OR) of 2.5 (95% CI: 1.03–6.3, $p = 0.04$), underscoring the important role that functional decline plays in the development of FOF (Bahat Öztürk et al., 2021).

In contrast to the previous study, which compared groups based on fall history, our study examined the overall association between fear of falling and functional ability. In the earlier study, women with a history of falls had significantly higher FES-I scores (median = 38.0, IQR: 31.5–44.0) than those without (median = 22.0, IQR: 20.0–30.0; $p < 0.001$), along with lower ADL, IADL, and SF-12 scores. In our study, the mean FES-I score was 38.26 (SD = 9.80) and functional ability (FAQ5) averaged 60, with a moderate negative correlation ($p = 0.012$). While both studies highlight the impact of fear on

function, the previous study focused on fall history, whereas ours quantified the relationship across a general elderly population (Miri & Norasteh, 2024).

In contrast to the our study, which did not explore gender-based differences, the referenced study found a significant association between gender and fear of falling. Females were notably more likely to report fear of falling than males, with an adjusted odds ratio of 4.25 (95% CI: 2.25–8.01). This highlights a potential gender disparity that was not captured in our analysis. Including gender as a variable in future studies could provide deeper insights into the demographic factors influencing fear of falling, especially considering the consistent pattern of higher fear levels among older women reported in previous literature. (Birhanie et al., 2021)

Overall, our study demonstrated a significant relationship between fear of falling (FOF) and functional ability among elderly participants, with a moderate to high concern about falling (mean FESI score of 38.26) and moderate functional limitations (mean FAQ5 score of 60.21). These findings are consistent with several recent studies. For example, similar to Huang et al. (2022), who found that older adults with higher levels of FOF performed worse on physical function measures like the Berg Balance Scale and Timed Up & Go test, our study also revealed that as functional ability decreased, FOF increased. Furthermore, our results align with de Souza et al. (2022), where severe functional impairment was linked to greater FOF, and better functional status correlated with lower levels of fear. Additionally, in line with Akosile et al. (2021), our study observed that severe functional impairment was associated with higher FOF, while those with better functional status had lower fear levels. Similarly, a study by Bahat Öztürk et al. (2021) also found a significant relationship between functional status and FOF, highlighting the critical role of functional decline in increasing fall-related anxiety. In contrast, while previous studies like Miri & Norasteh (2024) focused on fall history, our study examined the broader association between fear and functional ability across a general elderly population. Additionally, gender-based differences in FOF, as highlighted by Birhanie et al.

(2021), were not captured in our study, suggesting the need for future research to explore demographic factors, especially considering the consistent pattern of higher fear levels among older women.

Conclusion:

The study found a statistically significant relationship between fear of falling and functional ability among older adults ($p=0.018$). These results support the hypothesis that increased fear of falling is associated with decreased physical functioning. Therefore, the null hypothesis was rejected, and the alternate hypothesis was accepted, confirming that fear of falling adversely affects the functional independence of the elderly.

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