

Knowledge about Risk Factors for fall and Practice about Fall Prevention in Older Adults among Physiotherapists in Gujarat

Dr. Prashu Jain, Mehvish Kadri

Principal, Balaji College of Physiotherapy

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ABSTRACT

Background: Falls among older adults are a major public health concern and are associated with injuries, reduced mobility, loss of independence, and increased healthcare burden. Physiotherapists play an important role in identifying fall risk factors and implementing preventive strategies to reduce the incidence of falls in the elderly population.

Aim and Objectives: To assess the knowledge regarding risk factors for falls and the practices related to fall prevention in older adults among physiotherapists in Gujarat.

Methodology: A cross-sectional online survey was conducted among physiotherapists practicing in Gujarat. A structured questionnaire was used to collect information regarding demographic characteristics, knowledge of fall risk factors, and clinical practices related to fall prevention in older adults. The collected data were organized and analyzed using descriptive statistical methods.

Results: The findings revealed variations in the knowledge and practices of physiotherapists regarding fall prevention. Fifteen percent of the participants consistently documented fall risk factors, whereas the remaining participants reported documenting them often, sometimes, almost never, or never. Five percent of the respondents identified risk factors that were not directly linked to the prescribed intervention, and 25% considered referral as a preventive strategy for reducing falls among older adults.

Conclusion: Physiotherapists in Gujarat demonstrated an average level of knowledge and moderate practices regarding fall prevention in older adults, highlighting the need for continuous professional education and evidence-based training.

Keywords: Falls, Older Adults, Fall Prevention, Risk Factors, Physiotherapists.

INTRODUCTION

Falls among older adults represent a major public health concern across the world. They are associated with physical injuries, functional limitations, reduced independence, and increased healthcare utilization. The growing elderly population has further increased the burden of falls and their consequences. Approximately one-third of individuals aged 65 years and above experience at least one fall every year, and a considerable proportion of these falls result in serious injuries such as fractures, hospitalization, and disability.

Falls are multifactorial events that occur due to the interaction of intrinsic and extrinsic factors. Intrinsic factors include age-related physiological changes, impaired balance, muscle weakness, gait abnormalities, visual deficits, cognitive impairment, chronic diseases, medication use, and previous history of falls. Extrinsic factors include environmental hazards such as poor lighting, slippery floors, uneven surfaces, loose rugs, inappropriate footwear, and unsafe home conditions. The likelihood of falling increases when multiple risk factors are present simultaneously.

Apart from physical injuries, falls often lead to psychological consequences, including fear of falling, reduced self-confidence, social isolation, and decreased participation in daily activities. These outcomes negatively affect the quality of life of older adults and may contribute to increased dependence on family members and healthcare services.

Many risk factors associated with falls are modifiable. Early identification and appropriate management of these factors can significantly reduce the incidence of falls and improve functional outcomes among older adults. Physiotherapists play a crucial role in fall prevention through comprehensive assessment and intervention strategies. Their responsibilities include evaluating balance and mobility, identifying risk factors, prescribing strengthening and balance exercises, providing gait training, recommending assistive devices, educating patients and caregivers, and suggesting environmental modifications to enhance safety.

Evidence-based fall prevention strategies have demonstrated beneficial outcomes in reducing the occurrence of falls and promoting functional independence among older adults. However, variations still exist in the knowledge and clinical practices of healthcare professionals regarding fall risk assessment and prevention. Understanding the level of knowledge and the preventive practices adopted by physiotherapists is essential for identifying gaps in current practice and improving the quality of geriatric rehabilitation services. Therefore, the present study aims to assess the knowledge regarding risk factors for falls and the practices related to fall prevention in older adults among physiotherapists in Gujarat.

Need of Study

Despite increasing awareness regarding fall prevention, limited evidence is available regarding the knowledge of fall risk factors and the preventive practices adopted by physiotherapists in India. Understanding current clinical practices is important for identifying gaps in knowledge and promoting evidence-based interventions for older adults. Evaluating the approaches followed by physiotherapists can provide useful information for improving assessment strategies, enhancing rehabilitation protocols, and optimizing functional outcomes in the geriatric population.

Aim and Objectives

Aim:

To assess the knowledge regarding risk factors for falls and the practices related to fall prevention in older adults among physiotherapists in Gujarat.

Objectives:

To determine the self-reported level of knowledge regarding risk factors for falls.

To determine the practices related to fall prevention in older adults among physiotherapists.

REVIEW OF LITERATURE

1. Michael E. Kalu et al. conducted a study titled Knowledge about Risk Factors for Falls and Practice about Fall Prevention in Older Adults among Physiotherapists in Nigeria. The study included 237 physiotherapists who completed a questionnaire regarding knowledge of fall risk factors and preventive practices. The findings indicated that physiotherapists possessed satisfactory knowledge and demonstrated appropriate practices related to fall prevention. However, deficiencies were observed in areas such as documentation and interdisciplinary referrals, highlighting the need for context-specific clinical guidelines for fall prevention in Nigeria.

2. Claire Peel et al. performed a survey to assess fall prevention knowledge and practice patterns among home health physical therapists. The study reported that approximately 80% of therapists recommended balance training and strengthening exercises as preventive interventions. In contrast, fewer participants reported the use

of footwear modifications and referrals to other healthcare professionals. The findings suggested that therapists had adequate knowledge of fall prevention strategies but less frequently adopted multidisciplinary approaches.

3. Hilde Worum et al. examined the gap between research evidence and clinical practice in relation to the Otago Exercise Programme. The authors observed that evidence-based fall prevention programmes can effectively support clinical decision-making when appropriately adapted to practical settings. The study emphasized the importance of integrating research findings into routine clinical practice to improve the quality of fall prevention programmes.

4. In another study, Hilde Worum et al. investigated physiotherapists' perceptions regarding organizational factors that influence knowledge translation of the Otago Exercise Programme in Norway. The study highlighted the significance of leadership, supportive organizational culture, and contextual factors in the successful implementation and sustainability of evidence-based fall prevention programmes among community-dwelling older adults.

5. Faisal Asiri et al. evaluated the knowledge and practices related to fall prevention among home healthcare professionals in southern Saudi Arabia. The findings demonstrated that a majority of participants recognized the importance of falls and possessed adequate knowledge regarding preventive strategies. The authors recommended additional professional training to improve the identification of risk factors and enhance the implementation of fall prevention practices.

Definition of Keywords

FALL fall is defined as an event which results in a person coming to rest inadvertently on the ground or floor or other lower level.

DISABILITY: A disability is any condition of the body or mind (impairment) that makes it more difficult for the person with the condition to do certain activities (activity limitation) and interact with the world around them (participation restrictions).

METHODOLOGY

Study Design- Cross Sectional study Design.

Sample Size-102

Sampling Method- Convenient sampling

Settings- All over Gujarat

Inclusion Criteria

Physiotherapists involved in clinical/hospitals practice.

Age group: 25 to 45 years

Male and Female

Qualification: BPT & MPT

Exclusion Criteria: Not willing to participate

Procedure: After getting approval from the ethical committee from the concerned institution participants will be recruited from various hospitals and out patients clinics of Gujarat Physiotherapists involved in clinical or hospital practice who have experience of minimum 6 months will be included. Then the participants will be ask to fill up questionnaire Than the data analysis and interpretations will be done.

Materials and Tools: Google form

Outcome Measures: FALL PREVENTION QUESTIONNAIRE FOR HOME HEALTH PHYSICAL THERAPISTS.

Keywords:

Fall

Fall Prevention

Gait training

Balance training

Data Analysis

Data analysis is done through Microsoft Excel.

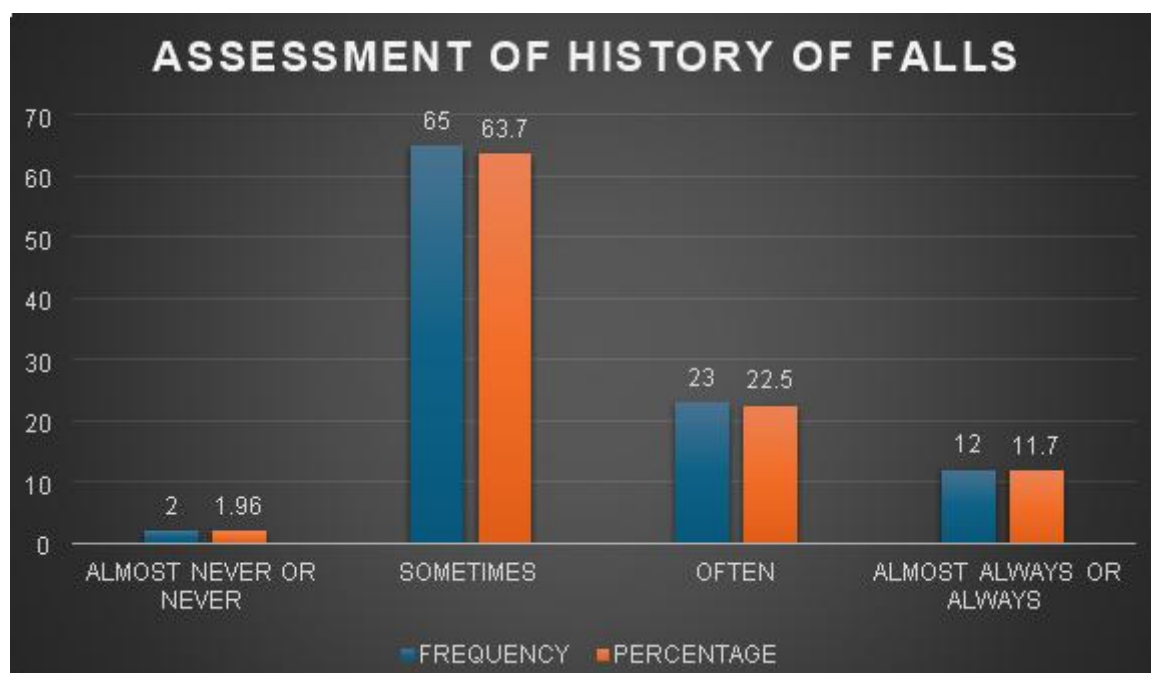
RESULT

Q1: In your initial assessment of patients, how often do you ask older adults if they have history of falls

Table 1: Assessment of History of Fall

R.NO		FREQUENCY	PERCENTAGE
1	ALMOST NEVER OR NEVER	2	1.96
2	SOMETIMES	65	63.7
3	OFTEN	23	22.5
4	ALMOST ALWAYS OR NEVER	12	11.7

Graph 1: Assesment of History of Falls



Q2: In your assessment of patients, how often do you

(A) Identify risk factors for falling?

Table 2: Identify Risk Factors For Falling

SR.NO		NO	PERCENTAGE
A)	IDENTIFY RISK FACTOR FOR FALLING		
1	ALMOST NEVER OR NEVER	1	0.98
2	SOMETIMES	26	25.4
3	OFTEN	64	62.7
4	ALMOST ALWAYS OR ALWAYS	11	10.7

B) Document risk factors for falling.

Table 3: Document Risk Factors For Falling

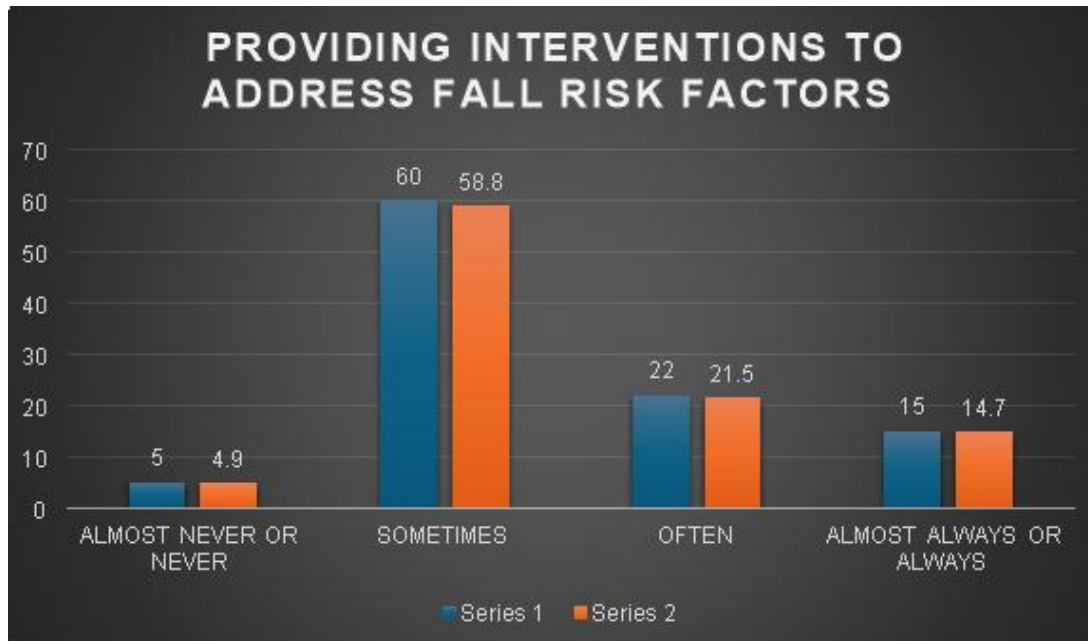
SR.NO		NO	PERCENTAGE
B)	IDENTIFY RISK FACTOR FOR FALLING		
1	ALMOST NEVER OR NEVER	1	0.98
2	SOMETIMES	23	22.5
3	OFTEN	62	60.7
4	ALMOST ALWAYS OR ALWAYS	16	15.6

Q3: In your treatment planning how often do you provide interventions to address fall risk factors?

Table 4: Intervention to Address Fall Risk Factors

SR.NO		NO	PERCENTAGE
1	ALMOST NEVER OR NEVER	5	4.9
2	SOMETIMES	60	58.8
3	OFTEN	22	21.5
4	ALMOST ALWAYS OR ALWAYS	15	14.7

Graph 2: Intervention To Address Fall Risk Factors



Q4: In your treatment planning how often do you refer patients to other health care professionals to address fall risk factors?

Table 5: Referring Patients to Other Health Care Professionals to Address Fall Risk Factors

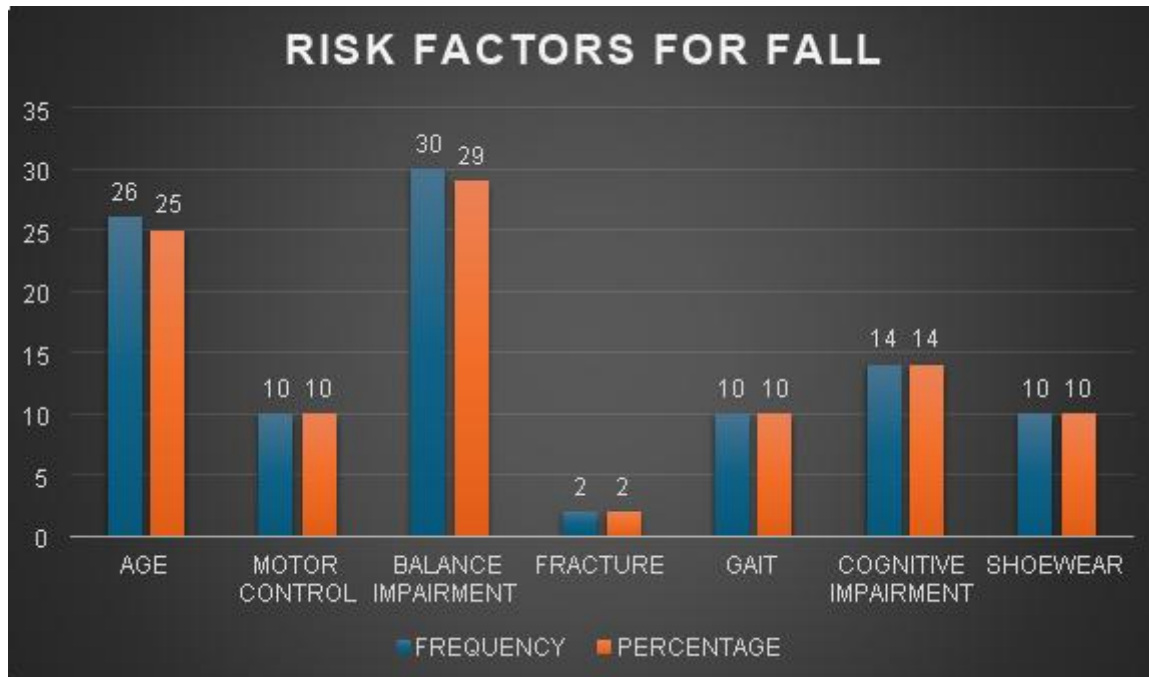
SR.NO		NO	PERCENTAGE
1	Almost Never or Never	2	1.9
2	Sometimes	73	71.5
3	Often	19	18.6
4	Almost Always or Always	9	8.8

Q5: Based on your current knowledge, list as many preventable risk factors for falls as you can think of?

Table 6: Risk Factors for Fall

SR.NO		FREQUENCY	PERCENTAGE
1	Age	26	25
2	Motor Control	10	10
3	Balance Impairment	30	29
4	Fracture	2	2
5	Gait	10	10
6	Cognitive Impairment	14	14
7	Shoewear	10	10

Graph 3: Risk Factors for Fall



Q6: Realizing that all risk factors are important, how do you think risk factor you named, is in contributing to falls?

Table 7: Contribution of Risk Factors to Fall

SR.NO		FREQUENCY	PERCENTAGE
1	NOT VERY IMPORTANT	1	1
2	SOMEWHAT IMPORTANT	60	59
3	MODERATELY IMPORTANT	18	18
4	VERY IMPORTANT	23	22

Q7: list as many activities that might help to prevent falls in older adults?

Table 7: Treatment for Preventing Falls

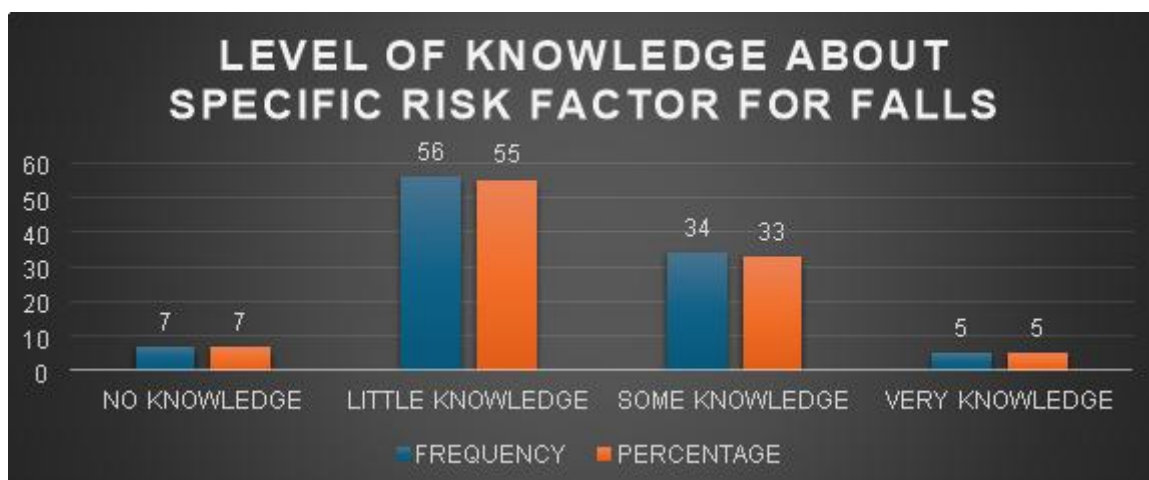
SR.NO		FREQUENCY	PERCENTAGE
1	BALANCE TRAINING	37	36
2	GAIT TRAINING	29	30
3	STRENGTH TRAINING	10	10
4	EXTERNAL AIDS	2	2
5	FOOT WEAR	24	22

Q8: How would you rate your level of knowledge about specific risk factors for falls in older adults?

Table 10: Level of Knowledge About Specific Risk Factor for Falls

SR.NO		FREQUENCY	PERCENTAGE
1	NO KNOWLEDGE	7	7
2	LITTLE KNOWLEDGE	56	55
3	SOME KNOWLEDGE	34	33
4	VERY KNOWLEDGE	5	5

Graph 10: Level of Knowledge About Specific Risk Factor for Falls



DISCUSSION

The findings of the present study indicate that most physiotherapists routinely assess older adults for fall risk by obtaining a history of falls and identifying factors associated with falling. However, only 15% of the participants reported consistently documenting fall risk factors, whereas the remaining participants documented these factors either often, sometimes, or almost never. This suggests that although fall risk assessment is commonly performed, proper documentation may not always be incorporated into routine clinical practice.¹

Most physiotherapists reported providing interventions to reduce fall risk in older adults. The commonly prescribed interventions included gait and balance training, strengthening exercises, environmental modification, and patient education. These interventions are considered important components of physiotherapy management and are widely used in fall prevention programmes.²

The findings further demonstrated that some physiotherapists experienced difficulty in linking identified risk factors with appropriate interventions. Approximately 5% of the respondents reported that the identified risk factors were not directly addressed through treatment planning. Previous studies have emphasized that the recognition of risk factors alone is insufficient and that interventions should be specifically targeted toward the identified factors to achieve effective fall prevention outcomes.¹ Muscle weakness, impaired balance, and reduced mobility are modifiable risk factors that can be effectively managed through physiotherapy interventions and may significantly reduce the incidence of falls among older adults.¹³

Another important finding of this study was the relatively low frequency of referral to other healthcare professionals. More than half of the respondents reported referring patients infrequently, and only 25% considered referral as an intervention for fall prevention. Although physiotherapists commonly address factors

such as gait deficits, balance impairment, and muscle weakness, other modifiable risk factors, including medication-related problems, postural hypotension, and footwear issues, may require the expertise of other healthcare professionals. Therefore, effective fall prevention strategies require a multidisciplinary and collaborative approach.^{2, 10, 11, 14}

The low referral practice observed in this study may be associated with limited awareness regarding the roles of other healthcare professionals, inadequate interdisciplinary communication, and time constraints in clinical settings. Previous research has demonstrated that multifactorial interventions, including strengthening and balance exercises, medication review, and management of medical conditions, are effective in reducing fall risk among older adults. Environmental hazards were also identified by participants as important contributors to falls. However, current evidence suggests that environmental modification alone may not be sufficient and should be combined with interventions targeting modifiable risk factors to achieve better outcomes in fall prevention.^{8, 14, 15}

CONCLUSION

Physiotherapists have an average level of knowledge regarding risk factors for falls, but only about 15% of physiotherapists in our study demonstrated practices related to fall prevention.

Summary

Falls among older adults are a significant health concern and may lead to injuries, reduced independence, fear of falling, and poor quality of life. Many fall-related risk factors are modifiable and can be addressed through appropriate assessment and intervention. The findings of the present study indicated that most physiotherapists routinely assessed older adults for fall risk by obtaining a history of falls and identifying associated risk factors. The commonly reported interventions included gait and balance training, strengthening exercises, environmental modifications, and patient education. However, the study also demonstrated variations in documentation practices and highlighted that the identification of risk factors alone is insufficient unless appropriate interventions are implemented. The findings emphasize the importance of evidence-based and multidisciplinary approaches to fall prevention in older adults.

Limitations

Sample size is small

Questionnaire would have contained more questions regarding the findings

Future Recommendations

The study can be done by taking large sample size.

Better Questionnaire can be taken.

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