

A Descriptive Study to Assess the Fall Risk Among Elderly People Residing at Selected Areas of Rajpura, District Patiala, Punjab

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Abstract

Introduction: According to the World Health Organization (WHO), falls are the second leading cause of accidental or unintentional injury deaths worldwide. Approximately 28- 35% of people aged 65 years and older fall each year, and this figure increases to 32-42% for those over 70 years. The severity of injuries from falls ranges from bruises and sprains to fractures (especially hip fractures), traumatic brain injuries, loss of independence, and even death. Many of these falls result in prolonged hospital stays, reduced mobility, loss of confidence, social isolation, and depression, which collectively impair the quality of life in older adults.

Material and Methods: A descriptive research approach with a non-experimental research design was employed to assess fall risk among elderly people residing at selected area of Rajpura. The total sample was 100 elderly people (aged 65 years and above), which are selected by convenience sampling technique. For present study, FROP-COM tool was used and the descriptive and inferential statistics used to analyze the data.

Results: The findings revealed that the majority (78%) of the participants were at mild risk of falls, while 13% were at moderate risk, and only 9% were at high risk. The mean fall risk score was 9.14 with a standard deviation of 5.94 indicating overall low fall risk levels in the population studied. Among demographic variables studied, only type of family ($p=0.000$) and source of income ($p= 0.000$) were found to have a statistically significance association with fall risk. Those living in joint families and depending on children or small business had higher fall risk compared to those from nuclear families or with a pension. **Conclusions:** Our findings shows that most elderly were at mild to moderate risk of fall, while very few had high risk. Use of health and fall prevention or geriatric services, family type and income had a clear impact on both fall risk and services use. These results highlight the urgent need for awareness programs, accessible services, and community based interventions. Nurses play an important role in identifying at risk elderly and promoting safe and healthy aging.

Keywords: Fall risk; Elderly; Health service utilization; Community services; Socio-demographic factors; Prevention

Introduction

Aging is a natural and progressive process that brings with it a range of physical,

Psychological, emotional, and social changes. As individuals grow older, they

Experience a gradual decline in functional ability, balance, muscle strength, vision, and cognition, which makes them more susceptible to health risks. Among the most

Significant of these risks are falls, which are now recognised globally as a major public health concern affecting the elderly population.¹ Fall-related injuries cause discomfort and disability for older adults as well as stress for caregivers. Independent of other morbidity conditions, falls are associated with restricted mobility, decline in the ability to carry out day-to-day activities and an increased risk of admission in a nursing home.²

Objectives of Study

1. To assess the risk of falls among the elderly people.
2. To find out the association between fall risk score of elderly people with their Socio- demographic variables.
3. To find out the association between community/ health services use score of elderly people with their socio demographic variables.

Materials and Methods

Research Approach : Quantitative research approach was used to assess the fall risk among elderly people.

Research Design : The descriptive research design selected for the study .

Research Setting of the study: The main study was conducted in Gandhi Colony of Rajpura, District Patiala, Punjab.

Population: Elderly people aged 60 years and above from selected areas of Rajpura.

Sample: The sample for the present study were 100 elderly people.

Sampling Technique: In this study, a non probability Convenience sampling technique was used to select sample, based on their availability and willingness to participate in the study.

Description and interpretation of the tool:

The tool for data collection consisted of three sections:

PART-A: Socio-Demographic Profile Sheet-It consist of Demographic characteristics of elderly people like gender, education level, marital status, type of family, source of income.

PART-B: Standardized Questionnaire-(FROP-COM) .It consist of 22 questions to assess the community services utilization among elderly people and 28 questions to assess the fall risk status of elderly people.

Validity of tool: The validity was established by experts of nursing department.

Reliability of the Tool

The reliability of tool was determined by using KR-20 Formula (Kuder-Richardson Formula 20). The calculated 'r' value was 0.714 and the tool was found to be reliable.

Results: Collected data were organized, tabulated ,and analysed by using the descriptive and inferential statistics basis on the objectives of the study to find out fall risk and association between the fall risk score with their selected demographic profile .

The plan of the data analysis was as follows:-

Table-1: Frequency and percentage distribution of Socio-demographic characteristics of study subject

SOCIO-DEMOGRAPHIC PROFILE		FREQUENCY (f)	PERCENTAGE (%)
Gender	Male	56	56.0%
	Female	44	44.0%
Marital Status	Single	7	7.0%
	Married	61	61.0%
	Widowed	32	32.0%
	Divorced	0	0.0%
Education	Primary	70	70.0%
	Secondary	24	24.0%
	Higher secondary	3	3.0%
	Graduate	3	3.0%
Type of family	Nuclear	81	81.0%
	Joint	19	19.0%
Source of Income	Pension	61	61.0%
	Saving	11	11.0%
	Dependent to kids	21	21.0%
	Business/Owner	7	7.0%

The study subjects were predominantly male(56%),married (61%),with primary –level education (70%),living in nuclear families(81%).most participants depended on pensions as their main source of income (61%).

Table –2: Frequency & Percentage distribution of Health/Community Services Use Scores among elderly people.

LEVEL OF SCORE	FREQUENCY (f)	PERCENTAGE (%)
GOOD (15-22)	0	0.0%
AVERAGE (8-14)	3	3.0%
POOR (0-7)	97	97.0%

Maximum Score=22 Minimum Score=0

Majority of the participants (97%) had poor utilization of health /community services.

Table –2.1 Frequency & Percentage distribution related to Fall Risk Scores among elderly people.

LEVEL OF SCORE	FREQUENCY (f)	PERCENTAGE (%)
HIGH (19-60)	9	9.0%
MODERATE (12-18)	13	13.0%
MILD (0-11)	78	78.0%

Maximum Score=60

Minimum Score=0

The findings reveals that the majority of participants i.e 78% lies under the mild risk category ,only 9% at high risk category.

Table No: 3 Association of fall risk scores with socio-demographic profile among elderly people.

SOCIO-DEMOGRAPHIC VARIABLES		N= 100			ASSOCIATION WITH FALL RISK SCORE		
Variable	Opts	H I G H	M O D E R A T E	M I L D	d f	Chi Test (X ²)	p Value
Gender	Male	8	7	41	2	4.34	0.11 ^{NS}
	Female	1	6	37		9	4 ^{NS}
Marital Status	Single	1	1	5	4	4.49	0.34 ^{NS}
	Married	7	10	44			
	Widowed	1	2	29		3	3 ^{NS}

Education	Primary	8	7	55	6	8.78	0.18 ^{NS}
	Secondary	0	5	19			
	Higher secondary	0	0	3			
	Graduate	1	1	1			
Type of family	Nuclear	2	8	71	2	28.4	0.00*
	Joint	7	5	7			
Source of Income	Pension	1	4	56	6	38.3	0.00 ^{NS}
	Saving	0	0	11			
	Dependent to kids	7	6	8			
	Business/ Owner	1	3	3			
						58	0 ^{NS}

NS = Not Significant, * = Significant P value < 0.05

There was no statistically significant association between most of the socio-demographic variables i.e gender, marital status, education, source of income, except for type of family which showed a significant association with fall risk ($p < 0.05$), indicating that family structure may influence fall risk among elderly people.

Table No:3.1 Association of Scores Health/ Community services use scores with socio-demographic profile among elderly people.

SOCIO-DEMOGRAPHIC PROFILE		N= 100			ASSOCIATION OF HEALTH/ COMMUNITY SERVICES USE SCORE		
Variable	Opts	G O O D	A V E R A G E	P O O R	Chi Test (X ²)	P Value	df
Gender	Male	0	3	53	2.430	0.119 ^{NS}	1
	Female	0	0	44			
Marital Status	Single	0	0	7	1.977	0.372 ^{NS}	2
	Married	0	3	58			
	Widowed	0	0	32			
	Divorced	0	0	0			

Education	Primary	0	3	67	1.325	0.723 ^{NS}	3
	Secondary	0	0	24			
	Higher secondary	0	0	3			
	Graduate	0	0	3			
Type of family	Nuclear	0	0	81	13.185	0.000*	1
	Joint	0	3	16			
Source of Income	Pension	0	2	59	0.797	0.850 ^{NS}	3
	Saving	0	0	11			
	Dependent to kids	0	1	20			
	Business/ Owner	0	0	7			

NS = Not Significant, * = Significant P value < 0.05

Health/community services use score has no significant association with gender, marital status, education, or source of income among elderly ($p > 0.05$). However, the type of family shows a statistically significant association with service use score ($p < 0.05$).

Discussion

The results of the survey showed that most of the older participants were married, male, had only completed primary school, lived in nuclear households, and relied primarily on pensions for their income. The majority of senior citizens (97%) showed poor use of community and health services, suggesting a lack of knowledge or accessibility. Despite the fact that 78% of participants had a minor fall risk, a sizeable percentage had a moderate to high risk, underscoring the necessity of preventative measures. Fall risk did not significantly correlate with the majority of sociodemographic factors, with the exception of family type, which did. The importance of family support in elder care was further highlighted by the considerable correlation found between the kind of family and the use of health and community services.

Conclusions

Despite the fact that the majority of older adults have a low risk of falling, the study finds that poor use of health and community services is very common among

them. The only sociodemographic factor that was substantially linked to both fall risk and service use was family type. When compared to elderly people in nuclear households, those living in joint families performed better. These results highlight how crucial it is to increase community-based nursing interventions and fortify family support in order to lower fall risk and enhance older adults' use of services.

Recommendations

- Conduct similar studies across various rural and urban areas with larger sample sizes to validate the results.
- Organize awareness campaigns focusing on fall prevention and the importance of health/community service utilization.
- Create community support groups for elderly individuals to discuss health concerns and coping strategies.
- Encourage family involvement in elderly care to ensure emotional and physical support.
- Integrate fall risk assessment tools into routine primary healthcare check-ups.
- Train community health workers to identify and counsel high-risk elderly individuals.

- Develop mobile-based IEC materials tailored for elderly people to disseminate critical health information.
- Collaborate with government bodies to improve accessibility to healthcare services, especially for vulnerable elderly groups.

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