

Fear of falls among nursing homes residents and community dwelling elderly

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Abstract

Background: fear of falling is common among elderly faller and it has been associated with impaired mobility and decreased functional status. As a result, older adults who have fallen are at greater risk of becoming institutionalized regardless of whether they have experienced an injurious fall.

Objectives: the aim of the study is to assess the prevalence of fear of falls in elderly in geriatric home and in community dwelling elderly.

Subjects and Methods:

Design: A comparative study.

Participants: 100 resident in nursing homes in Cairo and another 100 in community.

Measurements: comprehensive geriatric assessment (CGA) including Minimental status examination (MMSE-30), Geriatric Depression scale (GDS-15), Mininutritional assessment (MNA), time up and go test (TUGT), activity of daily living (ADL), instrumental activity of daily living (IADI), Single item question "are you afraid of falling?"

Results: the study showed that the prevalence of fear of falls in elderly living in nursing homes in Cairo is higher than others living in community, also showed that a higher percentage of environmental factors of falling among elderly in nursing homes compared to community, higher percentage of elderly with risk of fall living in nursing homes.

Conclusion: prevalence of fear of falls is higher in elderly living in nursing homes in Cairo than others living in community.

Keywords: falls, fear of falls, elderly, community, geriatric homes

Introduction

Older people make up a large and increasing percentage of the population of countries worldwide. As people grow older they are increasingly at risk of falling and suffering injury from falling⁽¹⁾.

Upon aging there is a progressive decrease in functional capacity, verified by reduced strength of lower limbs, impaired balance and agility. Such changes may impact a patient's daily activities such as climbing and descending stairs or sitting and standing up from a chair, besides reducing the ability of the elderly to promptly respond to external disturbances, such as slipping and stumbling, and to restore balance⁽²⁾.

Fear of falling (FOF) is a major health problem among the elderly living in communities, present in older people who have fallen but also in older people who have never experienced a fall. An estimated 30–55% of older persons acknowledge being afraid of falling, and approximately one third of them report restricting their activities. FOF has gained recognition as a specific health problem among

older adults. The reported prevalence of FOF varied between 3–85%⁽³⁾. However, when FOF results in avoidance of activities and reduction of physical fitness, it is a risk factor for future falls and associated mortality, dysfunctioning, and premature nursing home admissions⁽³⁾.

FOF is defined as an exaggerated concern about falls or the belief that one cannot prevent a fall. Intense anxiety about falls can be experienced by older adults who have fallen, as well as those who have not. Although studies have shown that women are at an elevated risk, fear of falls affects both men and women⁽⁴⁾.

FOF and activity avoidance may result in social isolation and inactivity, and threatens the quality of life if preventive measures are not taken in immediate future, the numbers of injuries caused by falls is projected to be 100% higher in the year 2030⁽⁵⁾.

Fear of falling may be a reasonable response to certain situations, that may lead elderly persons to be cautious, and can contribute to fall

prevention through careful choices about physical activity so, fear represents a reasonable reaction to possible danger and has few negative consequences as long as physical and social mobility remains unaffected. However, the fear of falling can initially present or progress beyond this point to become a debilitating condition ⁽⁶⁾.

Subjects and Methods:

Study design:

A comparative study conducted to assess the prevalence of fear of falls in elderly in geriatric homes and in community dwelling elderly. This study was approved by Ethical Committee of faculty of Ain Shams University.

Selection of Subjects

Sample size: 100 resident in nursing homes in Cairo and another 100 in community.

Selection of subjects:

- Aged 60 years or more.
- All subjects agreed to participate in the study were included.

Exclusion:

- Refusal of participation.
- Severe dementia. Severe depression.
- Immobile elderly.
- **Assessment:**

The following procedures were done for all subjects:

1. Informed consent.
2. Minimal status examination (MMSE-30) ⁽⁷⁾.
3. Geriatric Depression scale (GDS-15) ⁽⁸⁾.
4. Mininutritional assessment (MNA) ⁽⁹⁾.
5. Time up and go test (TUGT) ⁽¹⁰⁾.
6. ADL ⁽¹¹⁾.
7. IADL ⁽¹²⁾.
8. Single item question “are you afraid of falling” ⁽¹³⁾

Statistical analysis: The data was collected, coded and entered to a personal computer (P.C.) IBM compatible. The data was analyzed with the program (SPSS) statistical package for social science under windows version 15.0.

The statistical tests used in this thesis are:

- 1- Student t test:
- 2- Chi- square test (X²)
- 3- One way analysis of variance (ANOVA):
- 4- Bonferoni post hoc test:

A p-value less than 0.05 is considered a significant statistical difference.

Results

A higher percentage of elderly in nursing homes were afraid of falling 58% compared to 27% among community dwellers (Tab 1).

Tab (1): Comparison between elderly in nursing homes and community dwellers as regards the fear of falling by a single question (are you afraid of falling?).

Are you afraid of falling?	No No. %	Yes No. %	X ²	P
Elderly in community N=100	73 73.0	27 27.0	19.6	0.001**
Elderly in nursing homes N=100	42 42.0	58 58.0		

This table shows that a higher percentage of elderly in nursing homes were afraid of falling 58% compared to 27% among community dwellers and the difference is highly significant statistically.

higher percentage of environmental factors of falling among elderly in nursing homes compared to community dwellers (Tab 2).

Tab (2): Comparison between elderly in nursing homes and community dwellers as regards circumstances of previous falling.

Circumstances of previous falling	Community N=100 No. %	Nursing homes N=100 No. %	X ²	P
Environmental factors	10 10.0	27 27.0	9.5	0.002**
Surgical	5 5.0	8 8.0	0.7	0.3
Hospitalization	2 2.0	17 17.0	13.0	0.000**
Vision problems	16 16.0	33 33.0	7.8	0.005**
Hearing problems	6 6.0	12 12.0	2.1	0.1
Vestibulocerebral insufficiency	4 4.0	1 1	2.2	0.1

This table shows that a higher percentage of environmental factors of falling, higher percentage of previous hospitalization and problems of vision among elderly in nursing homes compared to community dwellers and the difference is highly significant statistically. And higher percentage of elderly with risk of fall living in nursing homes 52% compared to 27% in the community (Tab 3).

Table (3): Comparison between elderly in community and in nursing homes as regards risk of falls by the time up and go test TUGT.

Time up and go test	Normal No. %	At risk No. %	X2	P
Elderly in community N=100	73 73.0	27 27.0	13.0	0.001**
Elderly in nursing homes N=100	48 48.0	52 52.0		

Higher percentage of elderly with risk of fall living in nursing homes was 52% compared to 27% in the community and the difference is highly significant statistically.

Discussion

The result in current study shows that a higher percentage of elderly in nursing homes were afraid of falling 58% compared to 27% among community dwellers **Kumar *et al.***⁽¹⁴⁾ in their study in 1,088 community-dweller found that prevalence of fear of falls was 19%. **Cronin *et al.***⁽¹⁵⁾ in their study in 4914 community-dweller found that prevalence of fear of falls was 23.3%. **Gillespie *et al.***⁽¹⁶⁾ in their study of 112 new enrollees in LTC programs in New York found that prevalence of fear of falls was 48.2%. As regard circumstances of previous falling higher percentage of environmental factors of fear of falling among elderly in nursing homes compared to community dwellers and the difference is highly significant statistically. This calls attention to the importance of home safety for prevention of fear of falls

Higher percentage of problems of vision among elderly in nursing homes compared to community dwellers and the difference is highly significant statistically. This calls the attention for visual correction for prevention of fear of falls. Our result agrees with **Murphy *et al.***⁽¹⁷⁾ in their study that found visual impairment associated with fear of falls.

The result in the current study shows that higher percentage of elderly with risk of fall living in nursing homes was 52% compared to 27% in the community. Also higher fear of falling presents among elderly with risk of falls than elderly with no risk of falls. Our result agree with the study of **Lee *et al.***⁽¹⁸⁾ in their study in Korea in their study Who reported that the more people who at risk of falls by time up and go test the more fear of falls as falls is predisposing factor for fear of falls.

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