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KNOWLEDGE AND ATTITUDE OF ELDERLY RESIDENTS AT ELDERLY CARE HOME IN BAGHDAD REGARDING THE PREVENTION OF FALL

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ABSTRACT

Background: The ageing process involves progressive anatomical and physiological changes, with falls being a major global concern and a leading cause of traumatic death. **Aim of the study:** To evaluate the knowledge and attitude of elderly care home residents regarding falls, their preventive measures, and complications, and to assess the association between falls and selected sociodemographic characteristics. **Patients and Method:** A cross-sectional study was conducted in two elderly care homes in Baghdad (Al-Ataa and Al-Rahma) from August 1, 2024, to January 1, 2025. Out of 143 residents, 123 participated. Exclusion criteria included those unwilling to participate and those unable to respond due to physical or mental impairment. The questionnaire covered sociodemographic data, knowledge, and attitudes towards falls. **Results:** About 90.2% of participants were aware of the risks and complications of falls, 91.1% knew the causes, and 78% were familiar with preventive measures. Chronic disease was identified as the main cause of falls by 64.3%, while 46.9% considered frequent medical follow-up the key preventive measure. A history of at least one fall was reported by 61% of participants, with 56.3% experiencing only one fall. A significant association was found between chronic disease and a history of falls (P-value=0.029). **Conclusion:** Nearly half of the participants experienced at least one fall, with chronic disease being a significant risk factor. Most participants had adequate knowledge of the causes, complications, and preventive measures of falls among the elderly.

KEYWORDS: Knowledge, Attitude, Elderly, Residents, Elderly Care, Home, fall.

INTRODUCTION

The United Nations International Conferences on Ageing and Urbanisation said in 1991 that persons sixty years of age or over are elderly people.[1,2] Although in many developing nations the definition of the elderly is 60 years of age or more, in most industrialised nations 65 years of age is the normal.[3] Population ageing has been declared to be a global phenomenon. The elderly is the fastest-growing demographic group; by 2025, around 1.2 billion people globally over the age of 60 will exist.[4,5] There are increasing numbers of persons sixty years of age and above in the Eastern Mediterranean Region. With 1.12 million persons aged > 60 years in Iraq in 2012, this accounted for 4% of the country's total popsulation; in 2016, this figure reached almost 5%. Different gradual anatomical and physiological changes in the body define the ageing process.[1] These developments result in functional skills including those pertaining to physical exercise, vision, hearing, heart activity, and muscular strength.[6] Older adults are generally limited in everyday activities (81.3% have some sort of disability) and it is estimated that 68% have a cognitive impairment, therefore increasing their vulnerability to falls.[7] Fall-related issues are worldwide. About 600,000 falls globally cause mortality annually, hence falls are among the main causes of traumatic fatalities. Older persons have more risk of falling due to biological changes; this is a major issue in homes for residential aged-care.[7,8] Serious injuries occur for around 25% of falls among care home residents, falls are three times more prevalent in those living in a care home than in those of comparable age living in the community, and 40% of admissions from care home to hospital are connected to falls.[9]

Falls have evolved as the second most common cause of mortality among older individuals and the main source of injury among them.[10] Pain, functional limitations, morbidity, negative psychological impacts, and even fatality are connected with falls. Particularly functional deterioration results in frailty, which compromises quality of life and disability and thereby loads a

significant burden on social and medical services.[11] Fall hazards to patients are said to be both intrinsic and extrinsic. Whereas extrinsic factors relate to the physical environment of the hospital, medications, supportive and assistive equipment in bathrooms, lighting, and footwear, intrinsic factors are patient-related factors including age, comorbidity, previous falls, gait, visual/auditory impairment, musculoskeletal deficits and cognitive impairment.[12]

Moreover, falls and associated injuries will probably become more common among older persons due to their growing polypharmacy, frailty, and multimorbidity.[13] The dynamic character of frailty emphasises a possibility for preventative and restoring treatments to sustain the ability for self-care and to prevent impairments, falls, functional decline, institutionalisation, hospitalisation and mortality.[14] First stage in applying tailored and suitable training is assessing knowledge gaps of older persons.[10] The study's objective is to investigate the relationship between falls and various sociodemographic features and evaluate the knowledge and attitude of the senior care home residents regarding falls and their preventative measures and complications.

METHOD

A cross-sectional study was conducted in two elderly care homes in Baghdad, Iraq (Al-Ataa and Al-Rahma elderly care homes), from August 1, 2024, to January 1, 2025. Among 143 residents, 123 agreed to participate. Exclusion criteria included individuals who declined participation or were unable to respond due to physical or mental impairment.

Data collection was carried out through direct interviews using a structured questionnaire validated by Community Medicine Specialists. The questionnaire covered sociodemographic information, including age, gender, education level (illiterate, primary, secondary, university or higher), marital status (single, married, divorced, widow), history of chronic diseases, medication use, and history of falls, including the number of falls if applicable. Knowledge-related questions assessed awareness of fall risks, causes, prevention methods, and sources of information. Attitude assessment included five key questions, particularly focusing on participants' perspectives regarding the importance of health education in fall prevention.

Ethical Considerations

Approval was obtained from the Arab Board of Health Specializations. Verbal consent was secured by explaining the study's purpose, objectives, and confidentiality measures before participants agreed to respond to the questionnaire.

Statistical Analysis

Continuous variables were presented as mean values with standard deviations (SD), while categorical data were expressed as numbers and percentages. Statistical comparisons were performed using the Mann–Whitney U test, t-test, and Chi-Square test. A P-value of ≤ 0.05 was considered statistically significant, indicating a low probability that the observed outcomes occurred by chance.

RESULTS

A total of 123 participants were enrolled in the current study, and about 45.5% of them had an age of 60-65 years. Males constituted 68.3% of the sample. About 16.3 of the participants were unmarried, 17.1, married, and 19.5 were divorced. The highest proportions of the participants had primary school education (39.8%) and secondary school education (32.5). Unemployed participants constituted 41.5% of the participants while 38.2% were employed, as shown in table 1.

Table 1: Sociodemographic characteristics of the participants.

Sociodemographic characteristics		N (%)
Age group (years)	60-65	56 (45.5)
	66-70	33 (26.8)
	>70	34 (27.6)
Gender	Male	84 (68.3)
	Female	39 (31.7)
Marital state	Unmarried	20 (16.3)
	Married	21 (17.1)
	Divorced	24 (19.5)
	Widow	11 (8.9)
	Not reported	47 (38.2)
Educational level	Illiterate	24 (19.5)
	Primary school	49 (39.8)
	Secondary school	40 (32.5)
	college or higher	10 (8.1)

Regarding the medical history of the participants, 48% of the participants had hypertension, 16.5% had diabetes mellitus, and 14.6% had stroke as shown in table 2.

Table 2: Medical history of the participants.

Medical history	N (%)
Hypertension	59 (48.0)
Diabetes mellitus	32 (16.5)
Stroke	18 (14.6)
Osteoporosis or other bone disease	9 (7.3)
Chronic respiratory disease	8 (6.5)
Others	7 (3.3)
All patients with chronic disease	89 (72.4)

About 90.2% of the participants had information about the risks and complications of falls, 91.1% had information about the causes of falls, and 78% had information about the preventive method of falls as shown in table 3.

Table 3: Knowledge of the participants.

Knowledge of the participants	N (%)
Patients had information about the risks and complications of falls in the elderly	111 (90.2)
Patients had information about the cause of falls in elderly people	112 (91.1)
Patients had information about the intervention to prevent falls in the elderly	96 (78.0)

About 64.3% of the participants considered chronic disease as the main cause of falls and 46.9 of them recorded that frequent medical follow-up was the most important method to prevent falls (table 4).

Table 4: Details of the knowledge of the participants.

Knowledge about the causes and prevention of fall		N (%)
What are the main causes of falls in the elderly?	Chronic disease	72 (64.3)
	Accident	65 (58.0)
	Drugs	24 (21.4)
What is the intervention to prevent falls in the elderly?	Frequent medical follow-up	45 (46.9)
	Use of assistive device	28 (29.2)
	Review and management of medication	20 (20.8)
	Fall prevention education	18 (18.8)
	Home assessment and safety improvement	15 (15.6)
	Strength and exercise program	11 (11.5)
	Family support	9 (9.4)

The participants who reported that they had at least one attack fall constituted 61% of the participants, among them 56.3% had only one fall as shown in figure 1 and figure 2.

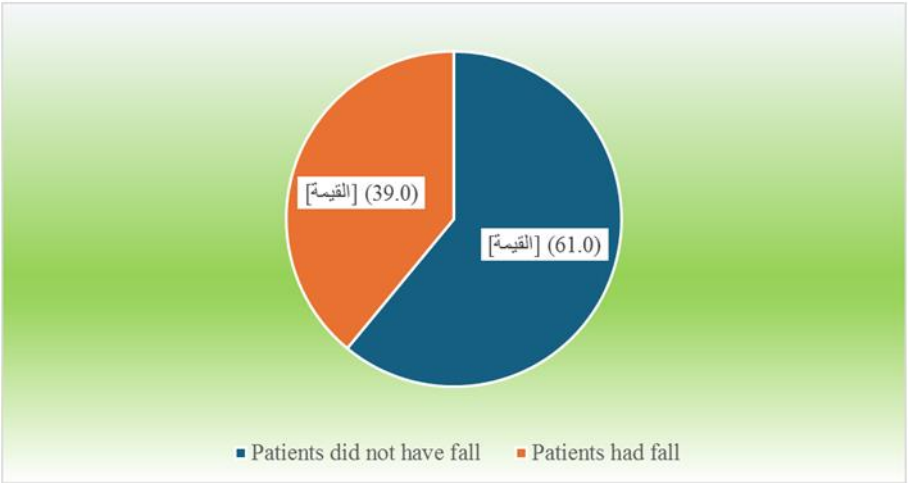

Figure 1: Distribution of participants according to the history of fall.

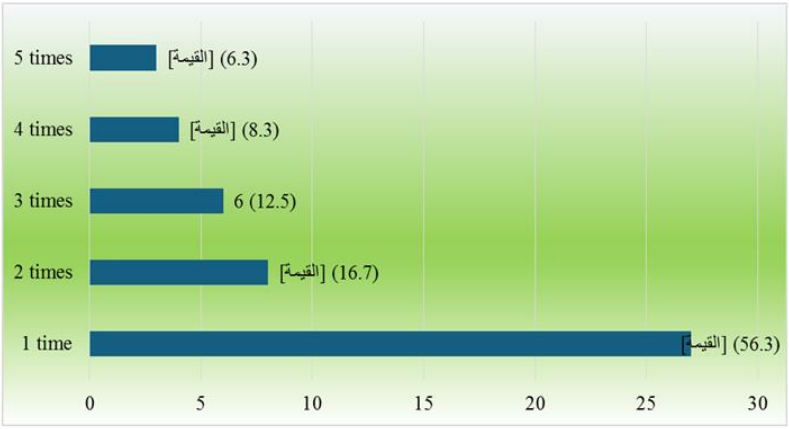

Figure 2: Distribution of the participants according to the number of falls.

Most of the patients had a positive attitude regarding the prevention methods of falls in elderly patients as shown in table 5.

Table 5: Attitude of the participants.

Attitude questions	Positive attitude N (%)	Negative attitude N (%)
Do you think that fall prevention programs can reduce the incidence of falls in the elderly?	122 (99.2)	1 (0.8)
Do you think that fall prevention programs enhance your well-being?	122 (99.2)	1 (0.8)
Do you think that fall prevention programs give your family peace of mind?	122 (99.2)	1 (0.8)
Do you think that fall prevention programs reduce your family burden?	122 (99.2)	1 (0.8)
Do you think that the fall prevention program is effective in reducing morbidity and mortality in Iraq?	122 (99.2)	1 (0.8)

There was no significant association between the knowledge and the history of falls among the participants (P-values were 0.0671, 0.402, and 0.493) as shown in table 6.

Table 6: Association between the knowledge and history of falls.

		Patients had fall attack	Patients did not have fall attack	P-value
Patients had information about the risks and complications of falls in the elderly	Yes	44 (91.7)	67 (89.3)	0.671
	No	4 (8.3)	8 (10.7)	
Patients had information about the cause of falls in the elderly	Yes	45 (93.8)	67 (89.3)	0.402
	No	3 (6.3)	8 (10.7)	
Patients had information about the intervention to prevent falls in the elderly	Yes	39 (81.3)	57 (76.0)	0.493
	No	9 (18.8)	18 (24.0)	

There was a significant association between a history of chronic disease and a history of falls among the participants (P-value=0.029). In contrast, there were no significant associations between falls and age groups, gender, marital state, and education level as shown in table 7.

Table 7: Association between sociodemographic and medical characteristics and the history of falls.

Sociodemographic and medical characteristics		Patients had fall attack	Patients did not have fall attack	P-value
Age group (years)	60-65	22 (39.3)	34 (60.7)	0.920
	66-70	12 (36.4)	21 (63.6)	
	>70	14 (41.2)	20 (58.8)	
Gender	Male	29 (34.5)	55 (65.5)	0.133
	Female	19 (48.7)	20 (51.3)	
Marital state	Unmarried	11 (55.0)	9 (45.0)	0.280
	Married	7 (33.3)	14 (66.7)	

	Divorced	11 (45.8)	13 (54.2)	
	Widow	2 (18.2)	9 (81.1)	
	Not reported	17 (36.2)	30 (63.8)	
Educational level	Illiterate	12 (50.0)	12 (50.0)	0.467
	Primary school	18 (36.7)	31 (63.3)	
	Secondary school	13 (32.5)	27 (67.5)	
	college or higher	5 (50.0)	5 (50.0)	
Patients had a chronic disease	Yes	40 (83.3)	49 (65.3)	**0.029**
	No	8 (16.7)	26 (34.7)	

Among participants who had information about the risk, cause, or prevention, the main sources of information were healthcare providers, social and mass media, and family members as shown in figure 3.

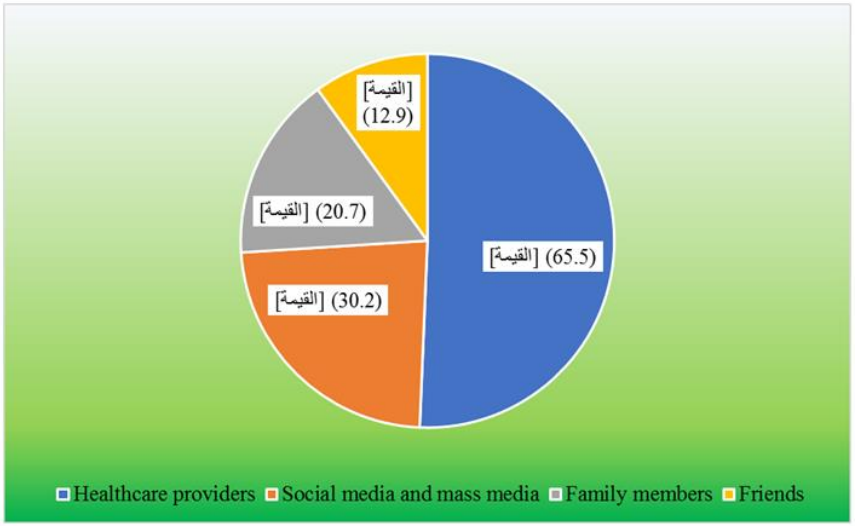

Figure 3: Sources of information.

DISCUSSION

Falls represent a predominant cause of injury and mortality among the elderly population. Although various strategies have proven effective in mitigating the risk of falls, their adoption remains limited. Comprehending the perspectives of senior individuals regarding fall risk and preventive measures can enhance outreach initiatives and foster engagement.[15] This study aimed to evaluate the awareness of fall-related issues among the geriatric population in Iraq. In the present study, the majority of participants possessed knowledge regarding the complications associated with falls in the elderly. Furthermore, a significant proportion of them were informed about the causes of falls among older adults, and over two-thirds of the participants were aware of intervention strategies aimed at preventing falls in this demographic. A separate study conducted in Iraq by Ali et al. revealed that 18% of the participants possessed a strong understanding, while 43% demonstrated a moderate understanding of fall prevention in elderly individuals.[16] In the Kingdom of Saudi Arabia, Fatimah Hakami disclosed that a significant proportion of the elderly population possessed awareness regarding environmental hazards within the residence.[17] The largest percentage of patients attributed their falls to chronic diseases, while a lesser percentage identified accidents as the cause. In another study that was done in the United States by Katelin et al., some older citizens consider falls an inevitable aspect of ageing, while others believe that falls can be prevented.[15] A multinational study indicated that the majority of patients possessed insufficient knowledge regarding the prevention of accidents among the geriatric population.[18] The most prevalent strategies selected by the participants to mitigate the risk of falls included regular medical follow-up, utilisation of assistive devices, and the review and management of medications. In a separate study conducted in Iraq by Rouaa Ahmed Abdulsaheb and Saba Abbas Fadhil, the primary preventive strategies selected by elderly individuals included health education, safety assessment and enhancement both within and outside the home, as well as regular medical follow-up.[19] The majority of patients exhibited favourable attitudes towards the preventive measures aimed at reducing accidents among the geriatric population. In a similar vein, a separate study conducted in Vietnam revealed that the majority of participants held a favourable perspective concerning the most effective preventive measures for falls among the elderly population.[20] Over one-third of the patients encountered at least one accident, with more than fifty percent of these individuals experiencing only a single incident. The prevalence of falls among the elderly population was reported to be 9.7% in China, as indicated by Zhengnan

et al.[21], 32% in Iran, as documented by Hamed et al.[22], 57% for males and 26% for females in the Kingdom of Saudi Arabia, as presented by Saad M. Bindawas[23], and 11% in Egypt, as reported by Abd El Hamied et al.[24] The incidence of falls was markedly elevated among participants with chronic diseases in comparison to their counterparts. Similar findings were reported in a separate study conducted by Zhengnan et al., which identified the history of chronic disease as the primary factor contributing to falls among the elderly population.[21] In a similar vein, Kazem et al. demonstrated that the presence of comorbidities, in conjunction with additional risk factors such as advanced age, reduced physical activity, and female gender, is correlated with a markedly elevated risk of falls among the elderly population. Healthcare providers, along with social and mass media, constituted the primary sources of information. In concurrence, Bunn et al. indicated that older individuals exhibited a preference for obtaining fall prevention information from a healthcare provider, which they identified as their principal source of health-related information.[25] In a separate study conducted in Iraq by Rouaa Ahmed Abdulsaheb and Saba Abbas Fadhil, it was determined that the primary sources of information concerning falls among the elderly were family members or relatives, social media, and medical personnel.[19]

CONCLUSION

At least one fall about half of the patients went through. Among these subjects, the history of chronic illness was the major risk factor. Most of the participants knew about the reasons, consequences, and preventative strategies for falls among senior individuals. Furthermore, majority of the participants felt favourably about the need of preventative actions against falls.

REFERENCES

1. Al-Kazrajy LA, Hammadi ZF, Al-Kazrajy LA. Mini nutritional assessment of sample of Iraqi elderly people attending geriatric unit at Baghdad Teaching Hospital. Annals of Tropical Medicine and Public Health, 2020; 23(13): 231-380.
2. Joshi M. Factors determining quality of life of elderly people in rural Nepal. J Gerontol Geriatr Res., 2020; 9(510): 2167-0374.2120.
3. Pais R, Ruano L, P. Carvalho O, Barros H. Global cognitive impairment prevalence and incidence in community dwelling older adults—a systematic review. Geriatrics, 2020; 5(4): 84.
4. Amorim JSCd, Salla S, Trelha CS. Factors associated with work ability in the elderly: systematic review. Revista Brasileira de Epidemiologia, 2014; 17: 830-841.
5. Jamil NF, Salih AA, Sadiq MA, Shaker SH. Assessment of nutritional status of elderly people in Baghdad. Annals of the Romanian Society for Cell Biology, 2021; 4457-4465.
6. Garzaro G, Clari M, Ciocan C, Albanesi B, Guidetti G, Dimonte V, et al. Physical Health and Work Ability among Healthcare Workers. A Cross-Sectional Study. Nursing Reports, 2022; 12(2): 259-269.
7. Hang J-A, Francis-Coad J, Burro B, Nobre D, Hill A-M. Assessing knowledge, motivation and perceptions about falls prevention among care staff in a residential aged care setting. Geriatric Nursing, 2016; 37(6): 464-469.
8. Schoberer D, Breimaier HE, Zuschnegg J, Findling T, Schaffer S, Archan T. Fall prevention in hospitals and nursing homes: Clinical practice guideline. Worldviews on Evidence-Based Nursing, 2022; 19(2): 86-93.
9. Logan PA, Horne JC, Gladman JR, Gordon AL, Sach T, Clark A, et al. Multifactorial falls prevention programme compared with usual care in UK care homes for older people: multicentre cluster randomised controlled trial with economic evaluation. bmj., 2021; 375.
10. Yang Y, Ye Q, Yao M, Yang Y, Lin T. Development of the Home-Based Fall Prevention Knowledge (HFPK) questionnaire to assess home-based fall prevention knowledge levels among older adults in China. BMC Public Health, 2022; 22(1): 2071.
11. Go YJ, Lee DC, Lee HJ. Association between handgrip strength asymmetry and falls in elderly Koreans: A nationwide population-based cross-sectional study. Archives of Gerontology and Geriatrics, 2021; 96: 104470.
12. Han YH, Kim HY, Hong HS. The effect of knowledge and attitude on fall prevention activities among nursing staff in long-term care hospitals. Open Journal of Nursing, 2020; 10(7): 676-692.
13. Montero-Odasso M, van der Velde N, Martin FC, Petrovic M, Tan MP, Ryg J, et al. World guidelines for falls prevention and management for older adults: a global initiative. Age and Ageing, 2022; 51(9).
14. Ibrahim K, Cox NJ, Stevenson JM, Lim S, Fraser SDS, Roberts HC. A systematic review of the evidence for deprescribing interventions among older people living with frailty. BMC Geriatrics, 2021; 21(1): 258.
15. Alfaro Hudak KM, Adibah N, Cutroneo E, Liotta M, Sanghera A, Weeks-Gariepy T, et al. Older adults' knowledge and perception of fall risk and prevention: a scoping review. Age and Ageing, 2023; 52(11).
16. Abdulameer AH, Al-Abedi GA. Elderly Knowledge of Fall Prevention at Primary Health Care Centers. Bahrain Medical Bulletin, 2024; 46(1).
17. Hakami F. Assessment of Elderly People Knowledge Regarding to Home Fall Prevention. Assessment, 2019; 67.
18. Francis-Coad J, Watts T, Etherton-Beer C, Panes G, Griffiths H, Anderson M, et al. Evaluation of older people's knowledge, awareness, motivation and perceptions about falls and falls prevention in residential aged care homes: a tale of two cities. Ageing and Society, 2019; 39(11): 2541-2559.

19. Abdulsaheb RA, Fadhil SA. The Knowledge of Elderly Clients Attending Geriatric Clinic at Baghdad Teaching Hospital towards the Prevention of Fall. Iraqi Postgraduate Medical Journal, 2019; 18(2).
20. Tang HT, Vu HM, Tang HT, Tran PT, Tran LV, Nguyen CD, et al. Knowledge, attitude and practice on fall risk factors and prevention among rural older community-dwellers in Vietnam. PLoS One, 2023; 18(11): e0295119.
21. Cheng Z, Li X, Xu H, Bao D, Mu C, Xing Q. Incidence of accidental falls and development of a fall risk prediction model among elderly patients with diabetes mellitus: A prospective cohort study. Journal of Clinical Nursing, 2023; 32(7-8): 1398-1409.
22. Tavan H, Azadi A. The frequency of fall, fear of fall and its related factors among Iranian elderly: A systematic review and meta-analysis. International Journal of Africa Nursing Sciences, 2024; 20: 100660.
23. Bindawas SM. The Changing Incidence and Prevalence of Falls and Its Disability Burden Among the Geriatric Population in Saudi Arabia from 1990 to 2019: A Longitudinal Analysis Using Global Burden of Disease Study Data. Cureus, 2023; 15(11): e49117.
24. El Sayed AEHI, Said MT, Mohsen O, Abozied AM, Salama M. Falls and associated risk factors in a sample of old age population in Egyptian community. Frontiers in public health, 2023; 11: 1068314.
25. Bunn F, Dickinson A, Barnett-Page E, Mcinnes E, Horton K. A systematic review of older people's perceptions of facilitators and barriers to participation in falls-prevention interventions. Ageing & Society, 2008; 28(4): 449-472.