

Research Article

Relationship Between Nurses' Practices Regarding Fall Prevention among Elderly Women and Their personal Characteristics

Sania Said Ghanem¹, Amal Abelazyem Mohammed², Salwa Ahmed Mohammed³, Hanan Elzeblawy Hassan^{4*}

¹Nurse director, Hamad Medical Corporation, Doha, Qatar

²Community Health Nursing, Faculty of Nursing, Beni-Suef University, Egypt

³Nursing administration Faculty of Nursing, Beni-Suef University, Beni-Suef, Egypt

⁴Maternal and Newborn Health Nursing, Faculty of Nursing, Beni-Suef University, Egypt

*Correspondence author: Hanan Elzeblawy Hassan, Maternal and Newborn Health Nursing, Faculty of Nursing, Beni-Suef University, Egypt;

Email: nona_nano_1712@yahoo.com

Abstract

Background: According to recent research conducted internationally, the reported rate of falls among older adults varies from 4% to 35% and rises progressively with age.

Aim of Study: assess relationship between nurses' practices regarding fall prevention among elderly women and their personal characteristics.

Research Design: An exploratory design; **Setting:** Outpatient clinics at Beni-Suef University Hospital.

Sample: a cross-sectional sample made up of one hundred nurses. **Instrument:** Independently administered; the questionnaire has two parts. (I): Personal attributes of nurses, (II): A checklist of nurses' practices.

Results: of the nurses in the study, about half (48.0%, 49% and 43%) were between the ages of 30-44, had five to fewer than ten years of experience and had received training in fall prevention and management, respectively. Less than two thirds of the studied nurses (61.0%) are competent in fall prevention total practices among elderly women patients.

Conclusion: A highly statistically significant relation between total practices of the studied nurses in fall prevention among the elderly women during hospitalization and their educational qualification, years of experience and training was found.

Recommendation: implement an educational program and guidelines related to fall prevention in elderly patients for in-services nurses.

Keywords: Relationship; Nurses' Practices; Fall; Elderly Women

Introduction

The term "elderly" refers to those aged 60 and above, who make up the world's fastest-growing demographic. This rise in life expectancy has resulted in an increase in the number of chronic diseases, resulting in more hospitalizations, numerous medicines and Adverse Drug Reactions (ADRs), Inappropriate use of medications is one of the public health domain's concerns, since it

may lead to severe (ADRs), which account for 3% to 23% of hospital admissions, longer hospital stays and higher morbidity and death rates [1-4].

The aging process is a natural occurrence that begins from pregnancy and lasts until death. It is brought on by the irreversible deterioration of systems and cells. The aging process involves changes in physiology, psychology, sociology and chronology and is not a pathologic process. At the biological level, aging is caused by a broad range of cellular and molecular damage that accumulates over time. This causes a sharp decline in mental and physical capacity as well as an increase in the risk of illness and eventually, death. These changes are neither linear nor consistent and their association with an individual's age in years is

Citation: Hassan HE, et al. Relationship Between Nurses' Practices Regarding Fall Prevention among Elderly Women and Their personal Characteristics. J Ortho Sci Res. 2024;5(1):1-7.

<https://doi.org/10.46889/JOSR.2024.5103>

Received Date: 30-12-2023

Accepted Date: 26-01-2024

Published Date: 03-02-2024



Copyright: © 2024 by the authors. Submitted for possible open access publication under the terms and conditions of the Creative Commons Attribution (CCBY) license (<https://creativecommons.org/licenses/by/4.0/>).

merely tenuous at best. The variety observed in elderly adults is not accidental. In addition to biological changes, aging is frequently linked to other life transitions including retirement, moving to a more suitable home and losing friends and lovers to death [5-11].

Aging is associated with changes in dynamic biological, physiological, environmental, psychological, behavioral and social processes. Some age-related changes are benign, such as graying hair. Others result in declines in function of the senses and activities of daily life and increased susceptibility to and frequency of disease, frailty or disability. In fact, advancing age is the major risk factor for a number of chronic diseases in humans [12-15].

Most people or a significant majority of people encounter a variety of characteristic aging symptoms over the course of their lifespan. The young child's ability to hear high-frequency noises above 20 kHz is lost in teenagers. The primary cause of wrinkles is photoaging, which is especially noticeable on the face and other sun-exposed areas. Female fertility drops after peaking in the late teens and early 20s [16].

The human body's mass decreases beyond age 30 until it reaches 70 years old, at which point it exhibits damping oscillations. People over 35 are more likely to develop presbyopia, a condition in which their eyes' ciliary muscles weaken and make it difficult for them to focus on close objects. Presbyopia usually strikes between the ages of 45 and 50. The cause is lens hardening by decreasing levels of alpha-crystallin, a process which may be sped up by higher temperatures [17].

Nurses can help by removing tripping hazards and improving lighting, providing assistive devices for mobility support, educating patients and caregivers on safe ambulation techniques and promoting regular exercise programs to improve strength and flexibility. Reviewing and adjusting medication regimens to minimize side effects that could increase the risk of falls and ensure regular eye and hearing exams should be taken in consideration to address any sensory impairment that may contribute to falls [18,19].

According to recent research conducted internationally, the reported rate of falls among older adults varies from 4% to 35% and rises progressively with age. Furthermore, there were 23.7% of falls (single falls: 17.9%, recurring falls: 5.8%). The majority of falls (69.6%) happened at home and 51.6 percent of them were brought on by a slippery floor [20]. Thus, the significance of this study lies in its potential to assist hospital administrators in developing new policies and strategic plans aimed at improving care quality and lowering the rate of fall prevention among older women.

Aim of Study

The study's objective is to evaluate the correlation between the personal traits of older women and the fall prevention practices used by nurses.

Research Question

Is there of relationship between socio-demographic characteristics on nurses at Beni-Suef university hospital and their practices regarding fall prevention among elderly women?

Material and Methods

Research Design

A descriptive exploratory design was used to conduct this study.

Study Settings

A descriptive exploratory design was used to conduct this study.

Sample: This cross-sectional sample consisted of 100 nurses, both male and female, who were treating patients with direct patient care ties.

Inclusion criteria:

- Age ranged from 21-45
- The minimum year of experience was at least 3 years.
- The educational level varied between diploma, technical nursing institute and bachelor's degree

Tools of Data Collection

Tool (1): Self-administered Questionnaire

It was composed of the following sections and was written in plain Arabic.

Part I: Personal characteristics of nurses such as age, level of education, years of experience and training.

Part II: Nurses' practices checklist: it adapted from [20,21]

Scoring System

The total scores of 45 steps were 45 degree which equal 100%, each step scored done (1) and not done (0). These scores were summed and were converted into a percent score. It was classified into 2 categories: Competent if total score 80% or more and Incompetent if total score from < 80%.

Content Validity and Reliability

Validity: Five professors and a group of community health nursing specialists confirmed it. Their thoughts on the format, arrangement, coherence, precision and applicability of the tools were solicited. Cronbach's lambda test was used to measure the tool's internal consistency in order to conduct a reliability analysis. Checklist for Nurse Practices was 0.819.

Pilot Study

To assess the use of the created tools and the validity of the questions, pilot research involving 10% of the sample of ten nurses was conducted.

Fieldwork

Data were gathered over a period of six months, starting in March 2022 and ending in September 2022.

Administrative Design

Management Design: Official authorization was obtained by the delivery of a formal letter from the hospital director to the dean of Beni Suef University's nursing faculty.

Statistical Analysis

Data were presented using descriptive statistics in the form of frequencies and percentages. Chi-square to assess the relations between variables and their characteristics, Significance of the results was measured at p-value; Highly significant at p-value < 0.01, Statistically significant was considered at p-value < 0.05 and non-significant at p-value $\geq$ 0.05.

Results

Fig. 1 shows socio-demographic characteristics of the studied nurses; around half of them (48.0% & 49% & 43%) aged 30-44 years old, have from 5 to less than 10 years of experience and had Training about fall prevention and management, respectively. In addition, one-third of them (33.0%) were graduated from technical institute of nursing.

Table 1 presents nurses' total practices for fall prevention among elderly women patients. It shows that less than two thirds of the studied nurses (61.0%) have competent practices in fall prevention total practices among elderly women patients, but almost two fifth of them (39.0%) are Incompetent.

Fig. 2 reveals that there is a highly statistically significant relation between total practices of the studied nurses in fall prevention among the elderly women during hospitalization and their educational qualification, years of experience and training with (p=0.000, p=0.002, p=0.000) respectively. As well, a statistically significant relation is found with their age with p=0.015.

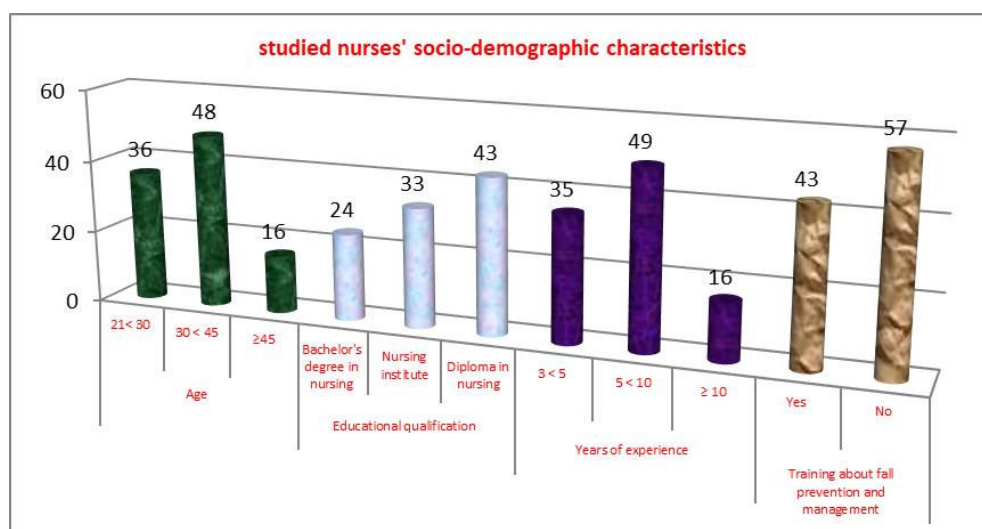


Figure 1: Number and percentage distribution of the studied nurses' according to their socio-demographic characteristics (n=100).

Total Practice	No	%
Competent	61	61.0
Incompetent	39	39.0
Total	100	100.0

Table 1: Percentage distribution of the studied nurses' according to their total practices for fall prevention among elderly women patients (n=100).

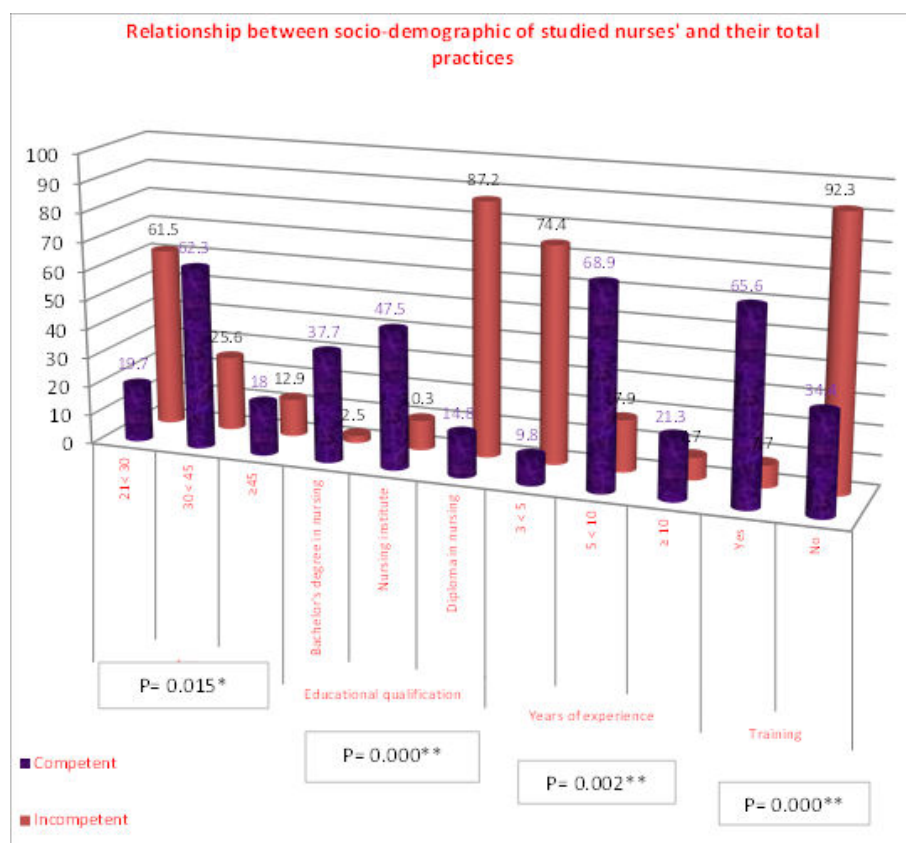


Figure 2: Relationship between socio-demographic characteristics of studied nurses' and their total practices in fall prevention among elderly women patients.

Discussion

Early adulthood marks the start of the gradual, ongoing process of natural change known as aging. An increasing number of body functions start to deteriorate in the early middle age. Hearing loss, cataracts and refractive errors, osteoarthritis and back and neck pain, chronic obstructive pulmonary disease, diabetes, depression and dementia are common illnesses among older adults. People are more prone to encounter multiple conditions concurrently as they get older [22-29].

Furthermore, a number of elders absorb the attitudes and ideas about aging that are prevalent in the broader society. A weakened feeling of self-worth and self-trust may arise from older people accepting unfavorable stereotypes about aging and dependency as well as experiencing some deterioration in their capacities. The conviction that one is incapable of making judgments for themselves or that one must heavily rely on others to do so might become self-fulfilling [30-32].

The current study's findings regarding the studied nurses' overall practices with regard to fall prevention among elderly female patients revealed that, although less than two-thirds of the studied nurses are competent in fall prevention overall practices, nearly two-fifths of them are incompetent. This result might be due to hospital based programs focusing on patient safety culture are also critical to promote safety of patient. It is also recommended that patients at high risk of fall should be under the care of experienced nurse who have upgraded skills in fall prevention. The results of a study by Ganabathi, et al., regarding "Nurses' knowledge, attitude and practices on fall prevention in King Abdul Aziz Hospital, Kingdom of Saudi Arabia" support this conclusion, demonstrating that the majority of the nurses in the study have good practices, with a small percentage having poor practices [33]. On other hand, this finding disagreed with study by Negash, who conducted study entitled "Assessment of self-reported practice of nurses towards fall prevention and its associated factors in an Ethiopian hospital" When it comes to fall prevention measures overall for older female patients, less than two thirds of the nurses under study performed poorly [34].

The purpose of the current study was to evaluate the correlation between the sociodemographic characteristics of senior ladies at Beni-Suef University Hospital and the nursing practices related to fall prevention. The results of the present study revealed that nurses' practices were better and competent among nurse 30 < 45 years, technical institute, who have 5-10 years experiences and who attended trading program regarding falling prevention and treatment. There is a highly statistically significant relation between total practices of the studied nurses in fall prevention among the elderly women during hospitalization and their educational qualification, years of experience and training with. As well, a statistically significant relation is found with their age.

As regards to relationship between socio-demographic characteristics of studied nurses' and their total practices in fall prevention among elderly women patients, the result of current study revealed that there is a highly statistically significant relation between total practices of the studied nurses about fall prevention among the elderly women during hospitalization and their educational qualification, years of experience and training. These results may be due to Nurses with higher education levels often receive more in-depth training in clinical skills, assessment techniques and evidence-based practices. This equips them with a broader range of skills to handle complex medical situations effectively. As well, a statistically significant relation is found with their age and gender. this finding in same line with study by Kim and Seo who conducted study about "Geriatric hospital nurses' knowledge, attitude toward falls and fall prevention activities" and reported that there is a statistically significant relation between total practices of the studied nurses about fall prevention among the elderly and their age, gender, educational qualification, years of experience and training [35].

Conclusion and Recommendation

A highly statistically significant relation between total practices of the studied nurses in fall prevention among the elderly women during hospitalization and their educational qualification, years of experience and training was found. In the light of results; implement an educational program and guidelines related to fall prevention in elderly patients for in-services nurses.

Conflict of Interests

The authors have no conflict of interest to declare.

References

1. Aboudonya M, Badr Elden S, Hassan H, Hafez S. Knowledge and practices used by old age patients to control polypharmacy. *Nile J Geriatric and Gerontol.* 2022;5(1):80-91.
2. Hassan H, Badr Elden S, Hamdi S, Aboudonya M. Control poly-pharmacy: elderly patients' practices. *Am J Pharmacological Sci.* 2021;9(2):56-62.
3. Hassan H, Badr-Elden S, Hamdi S, Aboudonya M. Control poly-pharmacy: elderly patients' perception. *Am J Medical Sci Med.* 2021;9(3):82-8.
4. Hassan H, Badr Elden S, Hamdi S, Aboudonya M. Poly- pharmacy among elderly patients: perception and practices. *J Nursing and Comm Med.* 2021;1(1):1-6.
5. Mohamed MM, Mohamed Saleh AS, Mohamed AA, Hassan HE. Hemodialysis nursing staffs' general knowledge regarding elderly and dialysis. *Psychol Mental Health Care.* 2023;7(5).
6. Saleh A, Mohamed A, Mohamed M, Hassan H. Nurses' knowledge regarding preventive measures for viral hepatitis B and C in dialysis Unit. *Am J Epidemiol Infectious Dis.* 2023;11(1):18-24.
7. Hassan H, Mohamed A, Saleh A, Mohamed M. Viral hepatitis B and C in hemodialysis units: preventive practices toward machine, equipment, environment and waste management. *Psychol Mental Health Care,* 2023;5(6):1-9.
8. Ahmed MM, Hassan HE, Mohamed AA, Saleh AS. Knowledge and practice of nurses toward preventive measures of elderly patients with viral hepatitis B and C in the dialysis unit. *Niles J Geriatric and Gerontol.* 2024;7(1):70-91.
9. Hassan H, Saleh A, Mohamed A, Mohamed M. Hemodialysis nursing staffs' knowledge regarding practices toward viral hepatitis B and C in dialysis unit. *Am J Nursing Res.* 2023;11(3):110-7.
10. Mohamed A, Mohamed M, Saleh A, Hassan H. Viral hepatitis B and C in elderly hemodialysis unit: nurses' related preventive practices. *World J Preventive Med.* 2023;11(1):10-15.
11. Saleh A, Mohamed M, Mohamed A, Hassan H. Viral hepatitis B and C in elderly hemodialysis unit: nurses' related knowledge. *Psychol and Mental Health Care,* 2023;7(6):1-8.
12. Sanjana CH, Kumari GS. Influence of loneliness on depression among the elderly living in Chennai. *Ind J Gerontol.* 2023;37(3):342-52.
13. Hassan H, Mohamed S, Ramadan E, Omran A. Urinary incontinence among menopausal northern upper Egyptian women impact of deep kegel and breathing exercises. *J New Medical Innovations and Res.* 2023;4(9):1-12.
14. Ghanim S, Mohamed S, Mohamed A, Hassan H. Nurses' knowledge and practice for reducing falls among older adult women. *Nile J Geriatric and Gerontol,* 2024;7(1):104-26.
15. Mohamed S, Hassan H, Omran A, Ramadan E Effect of Urinary Incontinence on Women's Physical Condition. *n. J Comm Med and Pub Health Rep,* 2024;5(2):1-5.
16. Shehabi AM, Prendergast G, Guest H, Plack CJ. The effect of lifetime noise exposure and aging on speech-perception-in-noise ability and self-reported hearing symptoms: An online study. *Frontiers Aging Neuroscience.* 2022;14:890010.
17. Adetuyi BO, Adebayo PF, Olajide PA, Atanda OO, Oloke JK. Involvement of free radicals in the ageing of cutaneous membrane. *World News of Natural Sci.* 2022;43:11-37.
18. De La Cuesta-Benjumea C, Lidón-Cerezuela B, Abad-Corpa E, Meseguer-Liza C, Arredondo-González CP. Managing and keeping control: A qualitative synthesis of nursing and care staff strategies to prevent older people from falling. *J Advanced Nursing.* 2021;77(7):3008-19.
19. Hassan H, Mohammed S, Mohammed A, Ghanem S. Study nurses' knowledge about fall prevention among elderly women. *Ortho Sci Res.* 2024;5(1):1-13.
20. Ha VA, Nguyen TN, Nguyen TX, Nguyen HT, Nguyen TT, Nguyen AT, et al. Prevalence and factors associated with falls among older outpatients. *Int J Environ Res Public Health.* 2021;18(8):4041.
21. Subramanian MS, Singh V, Chatterjee P, Dwivedi SN, Dey AB. Prevalence and predictors of falls in a health-seeking older population: An outpatient-based study. *Aging Medicine.* 2020;3(1):28-34.
22. Fahmy MR, Hassan HE, El-sherbieny EM. Coping strategies among elderly women suffering from knee osteoarthritis pain at Beni-Suef city. *NILES J Geriatric and Gerontol.* 2023;6(1):148-66.
23. Fahmy M, Alsherbiyen E, Hassan H. Knee osteoarthritis pain: coping strategies among elderly women. *Am J Public Health Res.* 2023;11(3):99-106.
24. Hassan H, Alshrbieny E, Fahmy M. Coping strategies among elderly women with knee osteoarthritis pain at beni-suef city: impact of socio-demographic characteristics. *J Ortho Sci Res.* 2023;4(1):1-4.

25. Alsherbieny E, Hassan H, Fahmy M. Knee Osteoarthritis among Elderly Women. *Am J Med Sci Med*. 2023;11(2):47-54.
26. Hassan H, Fahmy M, Alshrbieny E. Impact of elderly women's knee osteoarthritis pain on daily living activity at northern upper Egypt. *J Ortho Sci Res*. 2023;4(1):1-10.
27. Hassan H, Alsherbieny E, Fahmy M. Daily Living activity among elderly women with knee osteoarthritis pain: impact of socio-demographic characteristics. *World J Social Sciences and Humanities*. 2023;9(1):24-33.
28. Hassan H, Alsherbieny E, Fahmy M. Effect of elderly women's socio-demographic characteristics on knee osteoarthritis pain. *Am J Medical Sciences and Med*. 2023;11(2):39-46.
29. Hassan H, Mohamed M, Saleh A, Mohamed A. Beni-Suef elderly hemodialysis units: nurses' knowledge and preventive measures practices. *Am J Public Health Res*. 2023;11(4):67-73.
30. Hassan H, Abozed A, Elmghwry A, Ibrahim E. Compassionate care: correlation and predictors of nurses' and patients' opinions. *Am J Public Health Res*. 2021;9(5):234-43.
31. Ibrahim E, Mahmod A, Elmaghwry A, Hassan H. Compassionate care delivery: elderlies' perception. *Res Psychol Behavioral Sci*. 2021;9(1):24-32.
32. Hassan H, Abozed A, Mohamed A, Ibrahim E. Compassionate care delivery for elderly patients: nurses' perception. *Am J Applied Psychol*. 2021;9(1):22-35.
33. Ganabathi M, Mariappan U, Mustafa H. Nurses' knowledge, attitude and practices on fall prevention in King Abdul Aziz Hospital, Kingdom of Saudi Arabia. *Nur Primary Care*. 2017;1(5):1-6.
34. Negash NA. Assessment of self-reported practice of nurses towards fall prevention and its associated factors in an Ethiopian hospital; cross-sectional study. *Int J Orthopaedic and Trauma Nurs*. 2022;46:100960.
35. Kim SH, Seo JM. Geriatric hospital nurses' knowledge, attitude toward falls and fall prevention activities. *J Korean Gerontological Nurs*. 2017;19(2):81-91.

Journal of Orthopaedic Science and Research



Publish your work in this journal

Journal of Orthopaedic Science and Research is an international, peer-reviewed, open access journal publishing original research, reports, editorials, reviews and commentaries. All aspects of orthopaedic health maintenance, preventative measures and disease treatment interventions are addressed within the journal. Orthopaedicians and other researchers are invited to submit their work in the journal. The manuscript submission system is online and journal follows a fair peer-review practices.

Submit your manuscript here: <https://athenaeumpub.com/submit-manuscript/>