National Institute of Longevity Elderly Sciences
NILES Journal for Geriatric and Gerontology
Ghanim SS, **Reducing Falls**
Volume 7 , Issue 1
Original article

Nurses' Knowledge and Practice for Reducing Falls among Older Adult Women

Sania Said Ghanim[1], Salwa Ahmed Mohamed [2]

Amel Abdelaziem Mohamed [3], Hanan Elzeblawy Hassan [4,]

[1] Nurse director, Hamad Medical Corporation , Doha, Qatar
[2] professor of Nursing administration Faculty of Nursing, Beni-Suef University, Beni-Suef, Egypt
[3] Assistant professor of community health Nursing Faculty of Nursing, Beni-Suef University, Egypt,
[4] Assistant professor of maternal and newborn health Nursing Faculty of Nursing, Beni-Suef University
Email : saniaghanem1967@gmail.com Tel : +974 5533 9720

Abstract

Background: Aging is a gradual process that causes organ system function to deteriorate and physiological reserve to dwindle. Damage theories describe cellular or molecular damage caused by environmental disturbances or metabolic by-products. The 'shortening of telomere hypothesis' is a pre-programmed ageing theory. This study outlines the Nurses' awarness and Practice for Reducing Falls among Older Adult Women at Beni-Suef University Hospital. **Aim of Study: The aim of the study is to assess the nurse's knowledge and practice for reducing fall among old adult women at Beni-Suef University Hospital. Research design** A descriptive exploratory design was used to conduct this study. **Setting:** The study was conducted at inpatient unit. **Sample:** A purposive sampling composed from 100 nurses (male and female) who were providing care for patients connected to direct patient care at Beni-Suef hospital. **Tools:** Four tools were used in this study and classified as the following: Personal characteristics of nurses such as age, gender, level of education, years of experience, and training, Knowledge assessment sheet, Nurses' practices checklist, using more tools based on this score will start fall prevention measures **Results:** The study found that almost half of 100 nurses range in age from 30 to 45, are females, have less than half a diploma in nursing, and have 5-10 years of experience. Nearly two thirds of nurses (62.0%) have good knowledge about fall prevention, while less than one fifth (17.0%) have poor level. Less than two thirds (61.0%) are Competent in fall prevention total practices, while almost two fifths (39.0%) are Incompetent. There is a significant correlation between total knowledge and age, Educational qualification, Years of experience and Training, as well as Age and Gender. **Conclusion:** The study found that nearly two thirds of nurses had good knowledge about fall prevention among elderly women during hospitalization, while more than one fifth had average level. Less than two thirds were Competent, but almost two fifths were Incompetent. **Recommendation:** Implementation of evidence-based fall prevention programs can improve gait and balance, reduce falls, and improve nurses' knowledge and practice. The maintenance and restoration of older women's function should be incorporated into the care processes developed by clinical leaders and nursing teams. Further study should be conducted to understand the combination of factors that produce successful unit-level fall prevention strategies.

Keywords: Nurses' Knowledge and Practice, Fall, Challenges, Elderly people, prevention, assessment

Receive Date : 28/08/2023	Accept Date: 30/09/2023	Publish Date : 1/1/2024

Print ISSN 2636-3224
Online ISSN 2636-3232

Introduction

Organ system function declines and physiological reserve decreases as a result of aging, which is a process of gradual physiological degradation. Damage theories explain aging in terms of cellular or molecular deterioration brought on by alterations in the environment or the accumulation of dangerous metabolic byproducts. As our knowledge of the aging process expands, it becomes clear where the groups of hypotheses overlap. The 'shortening of telomere hypothesis' is viewed as a pre-programmed aging notion (1).

Older people are more commonly injured and killed by falls, costing the US healthcare system $50 billion annually. Around 50% of injury-related fatalities and 60% of ER visits among older individuals are caused by falls each year. A major issue for the elderly is drug-related falls because four out of five seniors use at least one prescription medication every day, and more than one third take five or more. Registered Nurses (RNs) play a critical role in lowering patients' fall risk by identifying prevalent drugs linked to falls, offering information, and collaborating with team specialists to manage prescription adverse effects(2).

Falls are more likely in those who perform or are active enthusiastically, and they are known risk factors for both subpar physical performance and pre-frailty. There is a lack of knowledge regarding the distribution of excellent and poor physical performance, the likelihood of falls, and the relationship between falls, physical function, and body composition. If risk factors for falls are recognized, case discovery and focused intervention may be beneficial (3).

Falls are the primary cause of sickness and death among the elderly, which has serious clinical, economical, and public health implications. Older people who have cognitive impairment are more likely to slip and fall, which is a substantial risk factor for falling. In addition to examining the association between medication use for neurodegenerative disorders and falls, the study's objectives include identifying the risk of falling, fall injuries, and fall rates among older persons with dementia. Prior studies have linked memory-impairing medication usage to a higher incidence of falls in geriatric care facilities.

Print ISSN 2636-3224
Online ISSN 2636-3232

There are known negative effects of drugs for memory problems, including falls (4).

The role of nurses is more than only prevention acknowledged with regard to fall prevention, and they are largely credited with the success in implementing preventive programmes. Nurses are considered key in raising awareness of patient safety in any health care facility. Falls are due to several factors, and a holistic approach to the individual and environment is important. Suppose a person is considered at high risk for falls after the screening. In that case, a Community health nurse should conduct a fall risk assessment to obtain a more detailed analysis of the individual's risk of falling. A fall risk assessment requires using a validated tool that researchers have examined to be useful in naming the causes of falls in an individual. As a person's health and circumstances change, reassessment is required (5).

The nurse Design an individualized plan of care for early detection and preventing falls. Provide a plan of care that is individualized to the patient's unique needs. Planning an individualized fall prevention program is essential for nursing care in any healthcare environment and needs a multifaceted approach. Avoid relying too much on universal fall precautions as different individuals have different needs. Universal fall precautions are established for all patients to reduce risk of falling. Standard strategies, in general, help develop a safe environment that reduces accidental falls and delineates core preventive measures for all patients (6).

Allow the patient to engage in a routine exercise program and gait training, which are exercises to build muscle, enhance balance, and boost bone density. Increased physical fitness lowers the risk of falling and lessens the severity of any injuries that may result from a fall. Exercise programs that are performed on land or in water may both improve balance and gait and lower the chance of falling. Women 65 years of age and older may benefit from water exercise in terms of balance and gait. If land-based exercise is difficult for older persons because of chronic musculoskeletal issues, water-based exercise may be considered as an alternative (7).

Print ISSN 2636-3224
Online ISSN 2636-3232

SIGNIFICANT OF THE STUDY

Physiological, biochemical, social, psychological, and environmental factors all play a role in why older women are more prone to accidents and injuries than younger ones. The elderly require special nursing care, which is vital. More emphasis should be placed on the nurses' role in promoting, maintaining, and restoring elderly women's health by reducing accidents and their complications. It depends on the nurses' knowledge and skills, as well as their capacity to meet the elderly needs or provide assistance in dire situations. In order to help them provide better care to this particularly vulnerable age group, it is critical to analyze how many nurses are educated about the crucial topic of preventing accidents among older women and to pinpoint any areas where they may be lacking.

This study, to the best of my knowledge, is the first to be carried out in Egypt to evaluate nurses' expertise and skills in the event of a fall among older women. It is a base line study that helps hospitals' administrative level to create new policies and strategic plans to improve the quality of care and reduce the prevention of fall among elderly women.

AIM OF STUDY

The aim of the study is to assess the nurse's knowledge and practice for reducing fall among old adult women at Beni-Suef University Hospital.

Methods

The subject and methods of the current study were designed under the following main four designs:

I. Technical Design
II. Operational Design
III. Administrative Design
IV. Statistical Design

I. Technical Design

It included research design, study settings, subject and tools of data collection.

Print ISSN 2636-3224
Online ISSN 2636-3232

Research Design

A descriptive exploratory design was used to conduct this study.

Study Settings

The study was conducted in out-patient clinic Beni-Suef university hospital which included 33 out- patient clinic divided into two building each building include two floors . the clinics involve a different specialties as a medical outpatient clinic, gynecology clinic, urology clinic, endemic disease clinic, anesthesia clinic, ultrasound clinic, audiology clinic, neurosurgery clinic, pain clinic, diabetic foot clinic, plastic surgery clinic, mental health clinic, autism clinic, ECHO clinic, cardiac surgery clinic, hematology clinic, Andrology clinic, dermatology clinic, rheumatoid clinic, vascular clinic, immunology clinic, general surgery outpatient clinic , ear and nose clinic, ophthalmology clinic, cardiac outpatient clinic, endocrine outpatient clinic, orthopedic outpatient clinic, neurological outpatient clinic, chest clinic, and physiotherapy outpatient clinic and each clinic covered by two to three nurses.

Subject:

A purposive sampling composed from 100 nurses (male and female) who were providing care for patients connected to direct patient care, the subjects were selected according to the following criteria.

Inclusion criteria:

Age ranged from 21-45; the minimum years of experience was at least 3 years. The educational level varied between diploma and bachelor's degree.

Data collection tools:

Four tools were used in this study and classified as the following:

1st tool: Structured Interviewing Questionnaire:

It was designed by the researcher after reviewing related literature to collect the required data. It was written in simple Arabic language, and it consists of seven parts.

Print ISSN 2636-3224
Online ISSN 2636-3232

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

Part II: Knowledge assessment sheet: it developed by the researchers after reviewing the related literature: it included 22 questions as Know the definition of fall, Know the approved tool for assessing falls risk, the rate of measurement, risks and prevention of falls, risk of falling, medications associated with falls and the harmful effects, and complications resulting from falls for the elderly…etc.

Part III: Nurses' practices checklist: it adapted from…….. It included three domains as fall risk screening for elderly (5 items), comprehensive fall risk assessment (28 items), and fall risk assessment also includes an evaluation of medications that affect the risk of falling and mobility /balance (12 items).

Part IV: Using more tools based on this score will start fall prevention measures, it included six items as History of Falls, Secondary Diagnosis, Ambulatory Aids, Iv Line in Place, Gait/ Transferring, and Mental Status.

II. Operational Design

Four phases made up the operational design for this project: the preliminary phase, ethical considerations, the pilot study, and the fieldwork

Preparatory Phase

Using books, papers, periodical magazines, and the internet to change the tool for data gathering, this step involved studying recent and historical, local and international, related literature. The investigator visited the chosen locations during this step to get to know the staff and the study locations. The tools were created under supervision, taking into account the advice of professionals.

Ethical Considerations

The study was approved by the ethical committee of the nursing department at Beni-Suef University. The researcher went over the goals and objectives of the study with the nurses who would be taking part in it before it started. Oral consent was obtained from the nurses before included them in the study, and a clear explanation was provided in accordance with their level of understanding. All information gathered was kept private and was only utilized for study, they ensured. The study's participants' data on them were kept

Print ISSN 2636-3224
Online ISSN 2636-3232

anonymous and secret by the researcher. The nurses were informed that they had the option to engage in the study or not, and that they had the ability to discontinue it at any moment.

Pilot Study

To assess the applicability of the created tools and the clarity of the questions, the pilot study was conducted on 10% of the nurses, or (10) nurses. The pilot helped determine how long it would take for each respondent to complete the questionnaire. The patients were included in the study sample since the findings of the pilot indicated that no item adjustments or omissions were made.

Fieldwork

Four months of data collection, from the beginning of March 2022 to the end of September 2022, were involved. The researcher initially introduced herself to the nurses in the aforementioned settings and then discussed the goal of the study. Using the previously indicated inclusion and exclusion criteria, the researcher chose nurses for the study settings they had chosen. Then, after getting the nurses' permission to participate, individual interviews were conducted. The researcher visited the study location twice a week on Sunday and Wednesday from 9 AM to 2 PM. The questionnaire was filled by nurses who take 15-30 minutes. The aim and the process of the study was explained to the studied nurses and collected by using the previously mentioned tools.

III. Administrative Design

By submitting a formal letter from the dean of the nursing faculty at Beni-Suef University to the hospital director, approval was officially granted. After a brief explanation of the study's goal and anticipated results, gather the essential data for the current study. Using the appropriate routes to contact authorized personnel

IV. Statistical Analysis

Data collected from the study sample was edited, coded, and entered using personal computers. For automated data entry and statistical analysis, SPSS version 22 was used (Statistical Package for Social Sciences). Frequencies, percentages, and Mean SD were used to present

Print ISSN 2636-3224
Online ISSN 2636-3232

data using descriptive statistics. Using chi-square, determine how well-established relationships exist between variables and their traits. A correlation coefficient, often known as a "Pearson correlation," is a metric used to express several types of connection, or a statistical relationship between two variables.

Results

Part I. Socio-demographic characteristics of the studied nurses'

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

Personal information	**N**	**%**
Age		
21< 30	36	36.0
30 < 45	48	48.0
≥45	16	16.0
$\bar{x}$ S.D 35.24± 1.02		
Gender		
Male	23	23.0
Female	77	77.0
Educational qualification		
Bachelor's degree in nursing	24	24.0
Nursing institute	33	33.0
Diploma in nursing	43	43.0
Years of experience		
3 < 5	35	35.0
5 < 10	49	49.0
≥ 10	16	16.0
$\bar{x}$ S.D 7.94± 0.25		
Training		
Yes	43	43.0
No	57	57.0

Print ISSN 2636-3224
Online ISSN 2636-3232

As shown in **table (1),** this study is conducted on 100 nurses. Regarding their socio-demographic characteristics, almost half of them of them (48.0%) range in age from 30 to less than 45 years old with mean 35.24±1.02 years. In addition, more than three quarters of them (77.0%) are females. As well, less than half of them (43.0%) have Diploma in nursing. As regard their years of experience, almost half of them (49.0%) have from 5 to less than 10 years with mean 7.94±0.25 years. Additionally, more than half of them (57.0%) hadn't training.

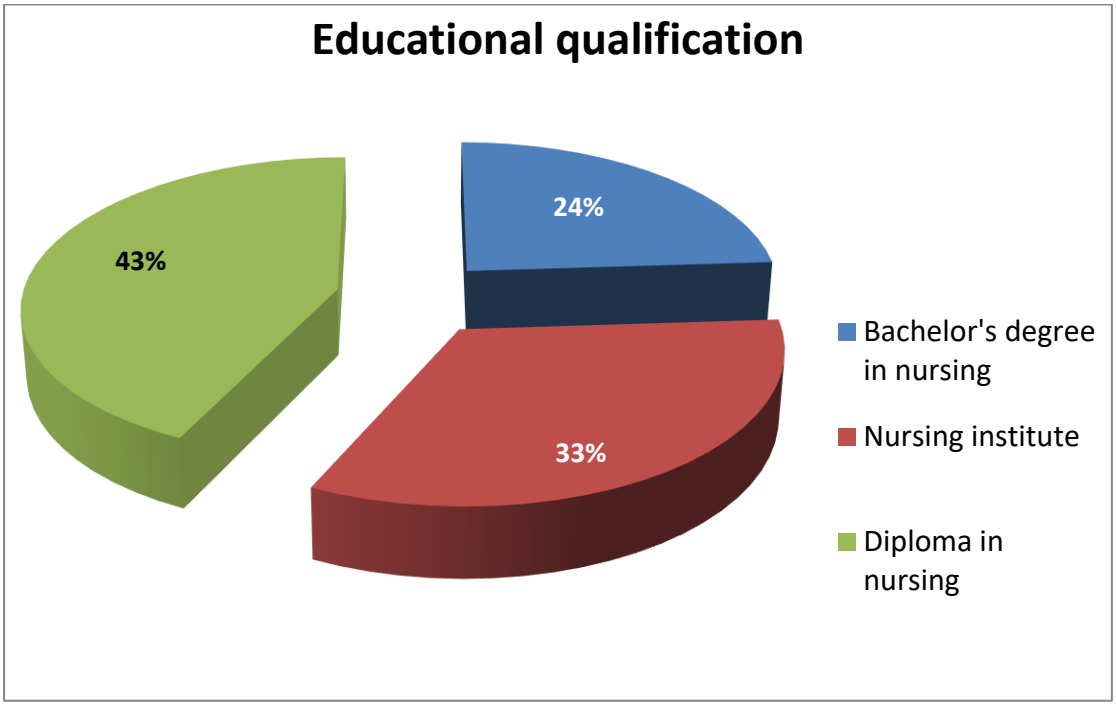

Figure (1): Percentage distribution of the studied nurses' according to their educational qualification (n=100).

Figure (1) represents that less than half of the studied nurses (43.0%) have diploma in nursing, about one third of them (33%) are at nursing institute, but almost one quarter of them (24%) have bachelor's degree in nursing.

Print ISSN 2636-3224
Online ISSN 2636-3232

Table (2a): Number and percentage distribution of the studied nurses' according to their information that assess the nurse's knowledge of falls (n=100).

Items	N	%
Have you been given courses or training on the possibility of preventing and controlling falls		
Yes	**62**	**62.0**
No	38	38.0
Know the definition of fall		
Yes	59	59.0
No	41	41.0
Know the approved tool for assessing the risk of falls		
Yes	44	44.0
No	56	56.0
If yes, what is the approved fall risk assessment tool n=44		
Morse	26	59.1
Humpty dumpty	18	40.9
Know the rate of measurement, risks and prevention of falls		
Yes	40	40.0
No	**60**	**60.0**
If yes, what is the measurement rate, risks and prevention of falls n=40		
0- 24 Low Risk • Basic Nursing Practice Safety Precautions	19	47.5
25- 45 Moderate Hazards • Standard Focus on Fall Prevention Interventions	15	37.5
> 46 High Risk • High Risk Fall Prevention Interventions	6	**15.0**

Table (2a) illustrates knowledge of the studied nurses about information that assesses the nurse's knowledge of falls. It reveals that less than two thirds of them (62.0%, 60.0%) report that they have been given courses and training on the possibility of preventing and don't know the rate of measurement, risks and prevention of falls respectively, while only more than one tenth of them (15.0%) mention that the measurement rate, risks and prevention of falls is more than 46 High Risk • High Risk Fall Prevention Interventions.

Print ISSN 2636-3224
Online ISSN 2636-3232

Table (2b): Number and percentage distribution of the studied nurses' according to their information that assess the nurse's knowledge of falls (n=100).

Items	N	%
Know who is at risk of falling		
Yes	82	**82.0**
No	18	18.0
***If yes, who are at risk of falling n=82**		
Age 60 or older	58	70.7
Weakness of the lower extremities	71	**86.6**
Female gender	15	18.3
Date of last fall	10	12.2
Physical Dysfunction	41	50.0
Cognitive impairment	20	24.4
Dizziness	52	63.4
Impaired walking or balance	69	84.1
Depression	9	11.0
Low body mass index	11	13.4
Urinary incontinence	18	21.9
Sensory deficit, especially visual deficit	55	67.1
Orthostatic hypotension	62	75.6
Use of more than four prescribed medications or use of psychotropic substances	41	50.0
Know the medications associated with falls and the harmful effects		
Yes	73	**73.0**
No	27	27.0
***If yes, what are the medications accompanying the fall and its harmful effects n=73**		
Diuretics	41	56.2
Antihypertensives	65	**89.0**
Antidepressants	45	61.6
Antipsychotics, orthostatic hypotension, muscle stiffness, sedation	33	45.2
Opiates	44	60.3
Hypnosis	23	31.5
Antidiabetics hypoglycemic medications	60	82.2

*more than one answer

Table (2b) indicates that most of the studied nurses (82.0%, 86.6%) report that they know who is at risk of falling and mention that those they have a weakness of the lower extremities respectively. Additionally, almost three quarters of them (73.0%) mention that they know the medications associated with falls and the harmful effects and most of them (89.0%) report that those are Antihypertensive medications.

Print ISSN 2636-3224
Online ISSN 2636-3232

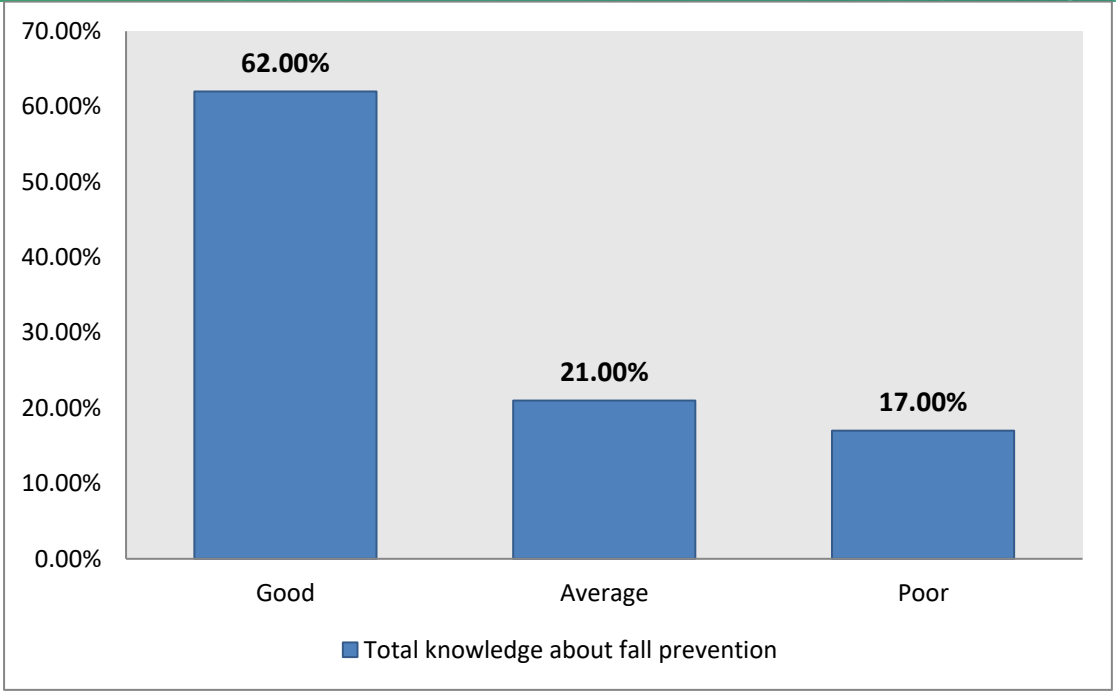

Figure (2): Percentage distribution of the studied nurses' according to their total knowledge about fall prevention among the elderly during hospitalization (n=100).

Figure (2) shows that, nearly two thirds of the studied nurses (62.0%) have good level of total knowledge about fall prevention among the elderly during hospitalization. Also, more than one fifth of them (21.0%) have average level, whilst less than one fifth of them (17.0%) have poor level.

Table (5): Number and percentage distribution of the studied nurses' according to their practice regarding fall risk screening for elderly (n=100).

Items	Yes		No	
	No	%	No	%
Had previous blackout	84	84.0	16	16.0
Experienced dizziness or palpitations	89	**89.0**	11	11.0
Found yourself on the floor and did not know why	83	83.0	17	17.0
Had many falls	41	41.0	59	59.0
Using assistive device	30	30.0	70	**70.0**

Table (5) clarifies practice of the studied nurses regarding fall risk screening for elderly. It shows that most of them (89.0%) report

Print ISSN 2636-3224
Online ISSN 2636-3232

that those who experienced dizziness or palpitations, but nearly three quarters of them (70.0%) mention that those who are using assistive device.

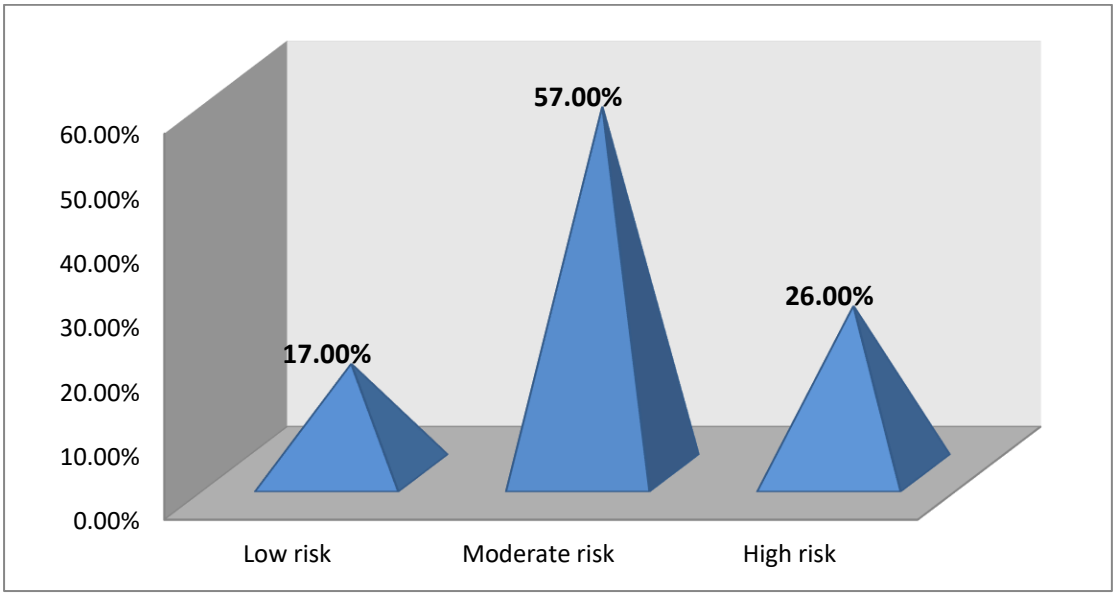

Figure (3): Percentage distribution of the studied nurses' according to their interpretation of score fall prevention measures (n=100).

Figure (3) shows that more than two thirds of the studied nurses (57.0%) have moderate risk and slightly more than one quarter of them (26.0%) have high risk, whilst nearly two one fifth of them (17%) have low risk.

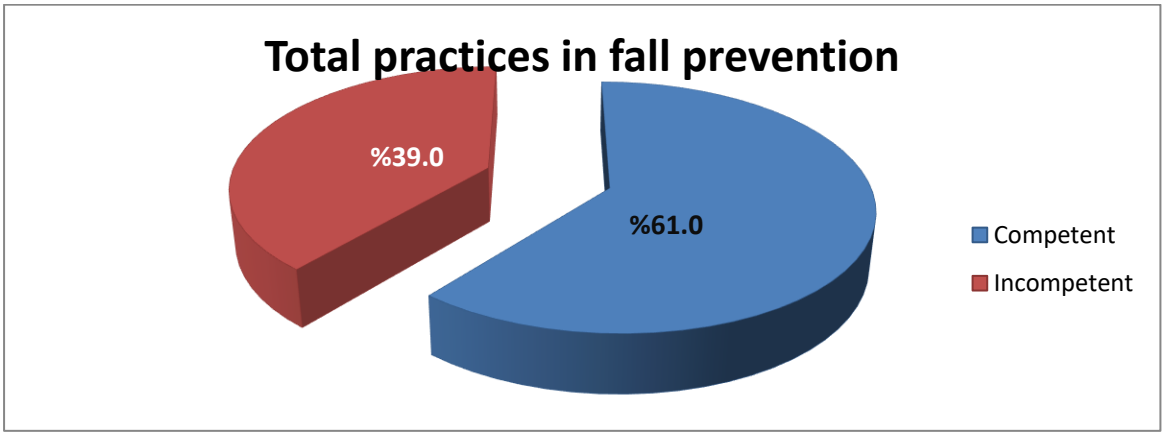

Figure (4): Percentage distribution of the studied nurses' according to their total practices in fall prevention among elderly women patients (n=100).

Print ISSN 2636-3224
Online ISSN 2636-3232

Figure (4) shows that less than two thirds of the studied nurses (61.0%) are Competent in fall prevention total practices among elderly women patients, but almost two fifth of them (39.0%) are Incompetent.

Table (10): Relationship between socio-demographic characteristics of studied nurses' and their total knowledge about fall prevention among the elderly during hospitalization (n=100).

Items		Total knowledge						X^2	P-Value
		Good N=62		Average N=21		Poor N=17			
		N	%	N	%	N	%		
Age	21< 30	8	12.9	15	71.4	13	76.5	11.71	.003**
	30 < 45	40	64.5	5	23.8	3	17.6		
	≥45	14	22.6	1	4.8	1	5.9		
Gender	Male	6	9.7	8	38.1	9	52.9	1.122	.085
	Female	56	90.3	13	61.9	8	47.1		
Educational qualification	Bachelor's degree in nursing	22	35.4	2	9.5	0	0	9.975	.005**
	Nursing institute	28	45.2	3	14.3	2	11.8		
	Diploma in nursing	12	19.4	16	76.2	15	88.2		
Years of experience	3 < 5	9	14.5	14	66.7	12	70.6	15.48	.002**
	5 < 10	37	59.7	7	33.3	5	29.4		
	≥ 10	16	25.8	0	0	0	0		
Training	Yes	39	62.9	3	14.3	1	5.9	12.29	.008**
	No	23	37.1	18	85.7	16	94.1		

***Significant at p ‹0.05. **Highly significant at p ‹0.01. Not significant at p>0.05**

Table (10) shows that there is a highly statistically significant relationship (p=0.003, p=0.005, p=0.002, p=0.008) between the studied nurses' overall knowledge of fall prevention among the elderly during hospitalization and their age, educational background, years of experience, and training. Their gender has no statistically significant relationship (p>0.05).

Table (12): Correlation between the studied variable (n=100).

		Total practice
Total knowledge	R	.625
	P	.001**

(**) Statistically significant at p<0.01. r Pearson correlation

Print ISSN 2636-3224
Online ISSN 2636-3232

Table (12) declares that there is a highly significant positive correlation between the studied nurses' Total practice and Total knowledge (p=0.001).

Discussion

A major cause of disability and a global health issue, falls are brought on by the physical decline of the aged. In any healthcare facility, including those that provide care at home, nurses have a significant responsibility to improve health and decrease falls among elderly patients with chronic diseases. By being instructed, ready, and motivated to do so, seniors can use the Otago Exercise Program (8).

The present study aimed to assess the nurse's knowledge and practice for reducing fall among old adult women at Beni-Suef University Hospital.

The current study's findings about the socio-demographic information of the nurses under study revealed that, on average, 35.241.02 years old, or nearly half of them, are between the ages of 30 and less than 45. Additionally, more than 75% of them are women. In terms of years of experience, over half of them have between five and ten, on average 7.940.25 years. According to researchers, this high percentage of female nurses is most likely due to the fact that BSN study in Egyptian universities was formerly only available to women, which contributed to the predominance of women in the nursing profession there.

According to the examined nurses' educational qualification, the result of present study showed that less than half of the studied nurses have diploma in nursing, approximately one-third of them attended technical nursing institute. but almost one quarter of them have bachelor's degree in nursing. this outcome supported with **(9)**. who conducted study entitled "Knowledge, attitude and prevention activities related to fall among of geriatric hospital nurse" It demonstrated that roughly one-third of the nurses who were examined hold a bachelor's degree in nursing . Conversely, this finding disagreed that study by **(10).)** who conducted study about "Nurses' perceptions of implementing fall prevention interventions to mitigate patient-specific fall risk factors" and reported

Print ISSN 2636-3224
Online ISSN 2636-3232

that less than half of the studied nurse held a baccalaureate degree in nursing.

Related to the studied nurse's knowledge of falls, the result of present study revealed that less than two thirds of them has knowledge about assessment of the fall among elderly. these findings consistent with study by[11]. who conducted study about " *Nurses' Fall Knowledge and Fall Prevention Practices for Hospitalized Elderly in Medan, Indonesia* " and reported that about two thirds of the studied nurses had knowledge about definition and assessment about falling. Moreover, this outcome agrees with study by [12]. Who conducted study about "Correlation between Nurses knowledge and obedience to the implementation of standard operating procedure" and reported that small percentage of the studied nurses had knowledge about methods of prevention.

According to knowledge about risk factors of falling among elderly, the findings of the present study indicated that most of them were aware of the risk of falling and mentioned that individuals who were weak in their lower extremities. This outcome in same line with study by [13] who conducted study about "The Perceived Knowledge of Fall Prevention in Nurses Working in Acute Care Hospitals in China and the United States" and indicated majority of the studied nurses had knowledge about risk factors among patients. Additionally, this finding is in line with the findings of a prior study by [14], who investigated the "Knowledge among Nurses of Fall Prevention Hospital" and discovered that most participants were adequately informed about individuals who were at risk of falling, mentioned those who had lower extremity weakness, and mentioned that they were aware of the medications related to falls.

Regarding to information about nursing care and practices among studied nurses', the result of current study illustrated that most of them report that they know the safety precautions and basic nursing practice and state that they provide adequate lighting for safe walking. Also, most of them mention that know the standard fall prevention interventions and state that they are Informing patients "at risk" during the shift / transfer

Print ISSN 2636-3224
Online ISSN 2636-3232

report. On the other hand, this finding disagreed with study by [15] that "Assessment of Nurses' Knowledge and Practices Regarding the Application of Safety Standard Precautions" who revealed that about two thirds of the studied nurses had incorrect knowledge about the safety precautions and basic nursing practice. this difference between studies might be due to level of education of nurses and lack of continuous supervision about infection control precaution.

Related to total knowledge about fall prevention among the elderly among the nurses under the study, the result of present study showed that, nearly two thirds of the studied nurses have good level of total knowledge about fall prevention among the elderly during hospitalization. Also, more than one fifth of them have average level, whilst less than one fifth of them have poor level. This finding might be due to less than half of the studied nurses had training about fall. The outcome harmony with study published by [16] who conducted study about "Testing the knowledge of staff nurses regarding the fall prevention" and revealed that most of the studied nurses have good level of total knowledge about fall prevention among the elderly. This result is also in line with a study by [17] that investigated nurses' knowledge of preventing patient falls in inpatient rooms of private hospitals in Medan and found that more than half of the nurses under investigation have good level knowledge.

Regarding the practice of the studied nurses, it is clear that the majority of them claim to complete and document patient fall risk assessments, report falls to doctors, and supervise nursing assistants while a patient is applying the fall. This result contrasted with a study by [18] that investigated the knowledge and practice of fall prevention among home healthcare professionals in southern Saudi Arabia and found that less than half of the nurses under study had competent documentation practices.

Concerning on practice of the studied nurses regarding the fall risk assessment also includes an evaluation of medications that affect the risk of falling and mobility /balance the result of present study illustrated that more than two thirds of them report that Antihypertensive affect the risk of falling and mobility /balance, but more than half of them mention that

Print ISSN 2636-3224
Online ISSN 2636-3232

Diuretic doesn't affect. this finding supported with study by [19] who conducted study about "Inclusion of medication-related fall risk in fall risk assessment tool in geriatric care units" and represented that antihypertension risk to increase falling among elderly.

Regarding to total practices of the studied nurses regarding to fall prevention among elderly women patients, the result of current study showed that less than two thirds of the studied nurses are Competent in fall prevention total practices among elderly women patients, but almost two fifth of them are Incompetent. This outcome could be attributed to hospital-based programs that emphasize patient safety culture, which are essential to promoting patient safety. Additionally, it is advised that patients who are at high risk for falls be looked after by nurses with experience and advanced fall prevention training. This finding match with study by[20]. who conducted study about "Nurses' knowledge, attitude and practices on fall prevention in King Abdul Aziz Hospital, Kingdom of Saudi Arabia" and showed that majority of the studied nurses have good practice and minimal percentage has poor practice .Contrary to study by [21], which was titled "Assessment of self-reported practice of nurses towards fall prevention and its associated factors in an Ethiopian hospital," less than two thirds of the nurses in that study had poor fall prevention practices overall for the elderly women patients they studied

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. As well, a statistically significant relation is found with their age and gender. this finding in same line with study by [22] 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.

Print ISSN 2636-3224
Online ISSN 2636-3232

Conclusion

In light of the current study, it can be concluded that, nearly two thirds of the studied nurses had good level of total knowledge about fall prevention among the elderly during hospitalization. Also, more than one fifth of them had average level, whilst less than one fifth of them had poor level. Furthermore, less than two thirds of them were Competent in fall prevention among elderly women patients, but almost two fifth of them were Incompetent.

Recommendations

Based on the findings of the study results, the following recommendations were advocated:

1. Improvements in gait and balance as well as reduce in the number of falls can be anticipated with the implementation of an evidence-based fall prevention program that emphasizes multifocal assessment, treatment, and follow-up.
2. Improve Practices of nurses through carrying out continuing educational session about falls prevention among older women and targeting safety threats needs to update their knowledge and practice.
3. Nursing teams and clinical leaders should create care procedures that consider preserving and regaining function in older women.
4. More research should be done to determine and comprehend the combination of elements that results in effective unit-level fall prevention techniques..
5. This study could be replicated to larger sample of nurses and in different settings to generalize the findings.

Declaration of Conflicts of interest:

The authors whose names are listed above have NO affiliations with or involvement in any organization or entity with any financial interest or non-financial interest (such as personal or professional relationships,

Print ISSN 2636-3224
Online ISSN 2636-3232

affiliations, knowledge or beliefs) in the subject matter or materials discussed in this manuscript.

Source of Funding:

self-Funding

References

1. **Young, F., & Maguire, S. (2019).** Physiology of ageing. Anesthesia & Intensive Care Medicine.
2. **Merchant, R. A., Chan, Y. H., Ling, N., Denishkrshna, A., Lim, Z., & Waters, D. (2023).** Association of Physical Function and Body Composition with Falls in Pre-frail Older Adults with Poor Physical Performance: A Cross-sectional study. Archives of Gerontology and Geriatrics, 104957.
3. **Lopez, M., Ma, C., Aavik, L., & Cortes, T. A. (2023).** Implementing a quality improvement program to reduce falls and increase patient medication satisfaction in an academic medical center. Geriatric nursing, 49, 207-211.
4. **Baniasadi, T. (2023).** Risk Factors Associated with Falls in Older Adults with Dementia and Alzheimers Diseases among Older Adults in the United States. medRxiv, 2023-01.
5. **Delle Fave, A., Bassi, M., Boccaletti, E. S., Roncaglione, C., Bernardelli, G., & Mari, D. (2018).** Promoting well-being in old age: The psychological benefits of two training programs of adapted physical activity. Frontiers in psychology, 9, 828.

Print ISSN 2636-3224
Online ISSN 2636-3232

6. **Lu, W., Pikhart, H., & Sacker, A. (2019).** Domains and measurements of healthy aging in epidemiological studies: A review. The Gerontologist, 59(4), e294-e310.
7. **Băjenaru, L., Marinescu, I. A., Dobre, C., Drăghici, R., Herghelegiu, A. M., & Rusu, A. (2020).** Identifying the Needs of Older People for Personalized Assistive Solutions in Romanian Healthcare System. Studies in Informatics and Control, 29(3), 363-372.
8. **Abd-Elraziek, E., Mahmoud, S., & Abd El-Fatah, S. (2021).** Otago Exercise Program (OEP): A Golden Technique on Health Status and Risk of Falls among Older Adults with Chronic Diseases. *Egyptian Journal of Health Care*, *12*(1), 84-104.
9. **Yoo, K. S. (2017).** Knowledge, attitude and prevention activities related to fall among of geriatric hospital nurse. Journal of Korean Public Health Nursing, 31(3), 436-450.
10. **Wilson, D. S., Montie, M., Conlon, P., Reynolds, M., Ripley, R., & Titler, M. G. (2016).** Nurses' perceptions of implementing fall prevention interventions to mitigate patient-specific fall risk factors. Western Journal of Nursing Research, 38(8), 1012-1034.
11. **Sinuraya, E. (2016).** Nurses' Fall Knowledge and Fall Prevention Practices for Hospitalized Elderly in Medan, Indonesia (Doctoral dissertation, Prince of Songkla University).
12. **Susanti R. (2015)** Correlation between nurses' knowledge and obedience to the implementation of standard operating procedure: Decreasing the risk of fall injury at the adult wardroom.
13. **Wang, L., Zhang, L., Roe, E., Decker, S., Howard, G., Luth, A., ... & Whitman, B. (2022).** The Perceived Knowledge of Fall

Print ISSN 2636-3224
Online ISSN 2636-3232

Prevention in Nurses Working in Acute Care Hospitals in China and the United States. Journal of Patient Safety, 18(2), e580-e584.

14. **Gupta, S. (2019).** Knowledge among nurses of fall prevention hospital
15. **Adly, R. M., Ismail, S. S., & Saleh, S. M. A. (2020).** Assessment of Nurses' Knowledge and Practices Regarding the Application of Safety Standard Precautions. international Journal of Novel Research in Healthcare and Nursing Vol. 7, Issue 3, pp: 524-543
16. **Horová, J., Brabcová, I., & Krocová, J. (2020).** Testing the knowledge of nurses regarding the prevention of falls. Journal of Nursing, Social Studies, Public Health and Rehabilitation, volume 11, issue: 3-4.
17. **Simamora, R. H., & Siregar, C. T. (2019).** Knowledge of Nurses about Prevention of Patient Fall Risk in Inpatient Room of Private Hospital in Medan. Indian Journal of Public Health Research & Development, 10(10).
18. **Asiri, F., ALMohiza, M. A., Faia Aseeri, M., Mehtab Alam, M., Ataalla, S. M., Alqahtani, M., & Alshahrani, A. (2018).** Fall prevention knowledge and practice patterns among home healthcare professionals in southern Saudi Arabia: an observational study. Journal of international medical research, 46(12), 5062-5073.
19. **Michalcova, J., Vasut, K., Airaksinen, M., & Bielakova, K. (2020).** Inclusion of medication-related fall risk in fall risk assessment tool in geriatric care units. BMC geriatrics, 20(1), 1-11.
20. **Ganabathi, M., Mariappan, U., & Mustafa, H. (2017).** Nurses' knowledge, attitude and practices on fall prevention in King Abdul

Print ISSN 2636-3224
Online ISSN 2636-3232

Aziz Hospital, Kingdom of Saudi Arabia. Nur Primary Care, 1(5), 1-6.

21. **Negash, N. A. (2022).** Assessment of self-reported practice of nurses towards fall prevention and its associated factors in an Ethiopian hospital; cross-sectional study. International journal of orthopaedic and trauma nursing, 46, 100960.

22. **Kim, S. H., & Seo, J. M. (2017).** Geriatric hospital nurses' knowledge, attitude toward falls, and fall prevention activities. Journal of Korean Gerontological Nursing, 19(2), 81-91.

Print ISSN 2636-3224
Online ISSN 2636-3232