Correlation between Nurses' Knowledge and Practices Regarding Fall Prevention among Elderly Women

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Abstract

Background: Elderly is a natural process, which starts with intrauterine life, continues until death and is caused by irreversible degeneration of cells and systems. For older adults, falls can be especially serious, are at higher risk of falling. Also explore correlation between nurses' knowledge and practices regarding fall prevention among elderly women.

Research design: An exploratory design Setting: Outpatient Clinics at Beni-Suef University Hospital. Sample: A cross sectional sampling composed from 100 nurses. Tool: Self-administered Questionnaire consists of 3 parts. (I): Personal characteristics of nurses, (II): Knowledge assessment sheet, (III): Nurses' practices checklist, **Results:** 48.0% of nurses were range in age from 30 -45 years old, 49.0% have from 5-10 experience years, and 43.0% had secondary nursing school. It shows that, 62.0% and 61.0%have good level of total knowledge, and practices, respectively, in fall prevention total practices among elderly women patients during hospitalization.

Conclusion: there is a highly significant positive correlation between the studied nurses' total practice and total knowledge (p=0.001). Recommendation: improve in-services nursing knowledge and practices by implementation guidelines related to fall prevention in elderly patients.

Key words: correlation; nurses' knowledge; practices; fall prevention; elderly women

Introduction

The old-age population suffers from chronic diseases and multi-morbidity and is treated with an increasing number of drugs which arises the phenomenon of Poly-pharmacy [1-4]. Elderly is not a pathological process and it consists of physiological, psychological, sociological and chronological changes [5-10].

Elderly women are more susceptible to accidents and injuries than younger ones as a result of physiological, biological, social, internal, and external factors. So, the assessment of how many nurses are knowledgeable about the important subject of accident prevention among elderly women and the identification of any points of knowledge deficiency is necessary to spark any effort to help them offer better service to this highly vulnerable age group [11-12].

Aging is the progressive accumulation of changes with time that are associated with or responsible for the ever-increasing susceptibility to disease and death which accompanies advancing age. These time-related changes are attributed to the aging process. The nature of the aging process has been the subject of considerable speculation. Falls can be dangerous at any age. Babies and young children can get hurt falling off furniture or down the stairs. Older children may fall off playground equipment [13].

Older adults are at higher risk for chronic health problems like diabetes, osteoporosis, and Alzheimer's disease, and falls are a leading cause of injury for this age group. Physical activity can help prevent both chronic disease and fall-related injuries in older adults. Early old age can be a pleasant time; children are grown, work is over, and there is time to pursue other interests. Many old people are also willing to get involved in community and activist organizations to promote well-being. In contrast, perceptions of old age by writers 80+ years old tend to be negative [14-18].

The factors that contribute to falls among the elderly, the best predictor of falling is a previous fall. However, falls in older people rarely have a single cause or risk factor. A fall is usually caused by a complex interaction among the following: Intrinsic factors (age-related decline in function, disorders, and adverse drug effects). Extrinsic factors (environmental hazards). Situational factors (related to the activity being done, eg, rushing to the bathroom) [19].

Aim of Study

The aim of the study is to explore correlation between nurses' knowledge and practices regarding fall prevention among elderly women.

Research Question

Is there of correlation between nurses' knowledge and practices regarding fall prevention among elderly women?

SUBJECTS AND METHODS

Research Design

An exploratory design was used to conduct this study.

Study Settings

The study was conducted in outpatients at Beni-Suef university hospital.

Sample:

A cross sectional sample composed from 100 nurses.
Tools of data collection:
Tool (1): Self-administered Questionnaire:
It was written in simple Arabic language, and it consists of the following parts.
Part II: Knowledge assessment sheet: it developed by the investigator after reviewing the related literature [16].
Scoring system: It was classified into 3 categories:
  - **Good** knowledge if total score 75% or more.
  - **Fair** knowledge if total score from 50 to 75%.
  - **Poor** knowledge if total score <50%.
Part III: Nurses' practices checklist: it adapted from [20-21].
Scoring system: It was classified into 2 categories:
  - **Competent** if total score 80% or more
  - **Incompetent** if total score from < 80%
Content Validity & Reliability:

Validity: It was ascertained by a group of experts in Community Health Nursing (5) professor. Their opinions elicited regarding the format, layout, consistency, accuracy and relevancy of the tools. Reliability analysis by measuring of internal consistency of the tool through Cronbach's Alpha test; Knowledge assessment sheet was 0.824, Nurses' practices checklist was 0.819, and Using more tools based on this score will start fall prevention measures was 0.837.

Ethical Considerations

The research approval was obtained from the ethical committee of the faculty of medicine Beni-Suef University. The investigator was clarified the objectives and aim of the study to nurses included in the study before starting.

Administrative Design

An official permission was obtained by submission of a formal letter issued from the Dean of faculty of nursing, Beni-Suef University to the director of hospital.

Statistical Analysis

Data collected from the studied sample was revised, coded and entered using Personal Computer (PC). Computerized data entry and statistical analysis were fulfilled using the Statistical Package for Social Sciences (SPSS) version 22. A correlation coefficient "Pearson correlation" is a numerical measure of some type of correlation, meaning a statistical relationship between two variables. Statistically significant was considered at p-value < 0.05

RESULTS

Figure (1) shows that 48.0% of nurses were range in age from 30 to 45 years old. Almost half of them (49.0%) have from 5 to 10 years

Figure (2) shows that 43.0% had secondary nursing school. Additionally, more than half of them (57.0%) hadn't training program regarding failing prevention and treatment.

Figure (3) presents the percentage distribution of the studied nurses' according to their total knowledge and practices about fall prevention among the elderly during hospitalization. It shows that, nearly two thirds of the studied nurses (62.0%) have good level of total knowledge, and about two-thirds of the studied nurses (61.0%) are competent in fall prevention total practices among elderly women patients during hospitalization.
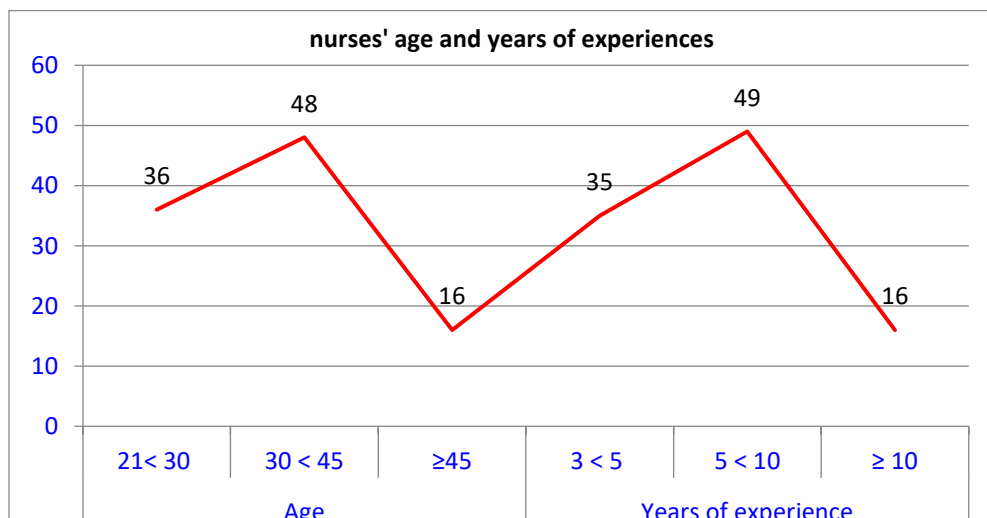

Table 1: declares that there is a highly significant positive correlation between the studied nurses' total practice and total knowledge (p=0.001).
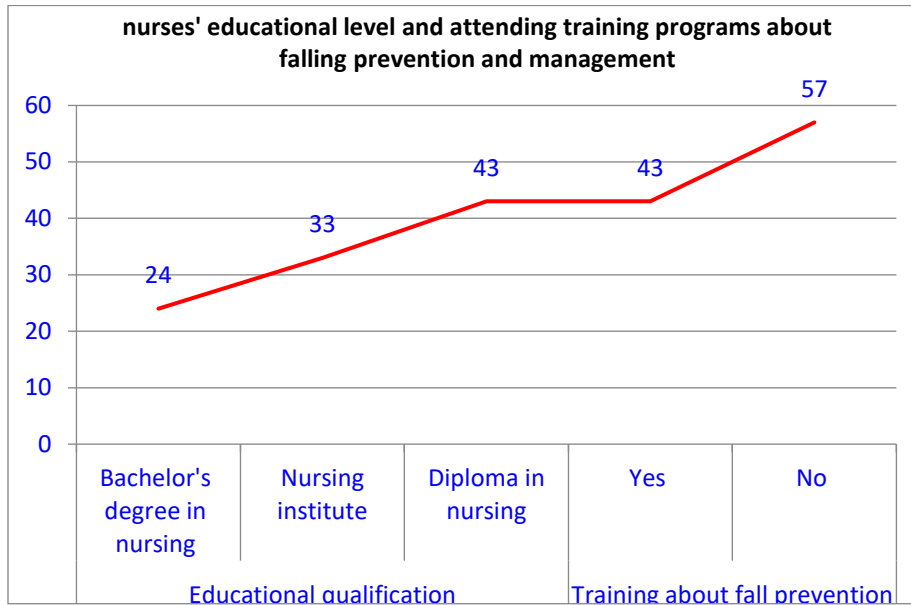
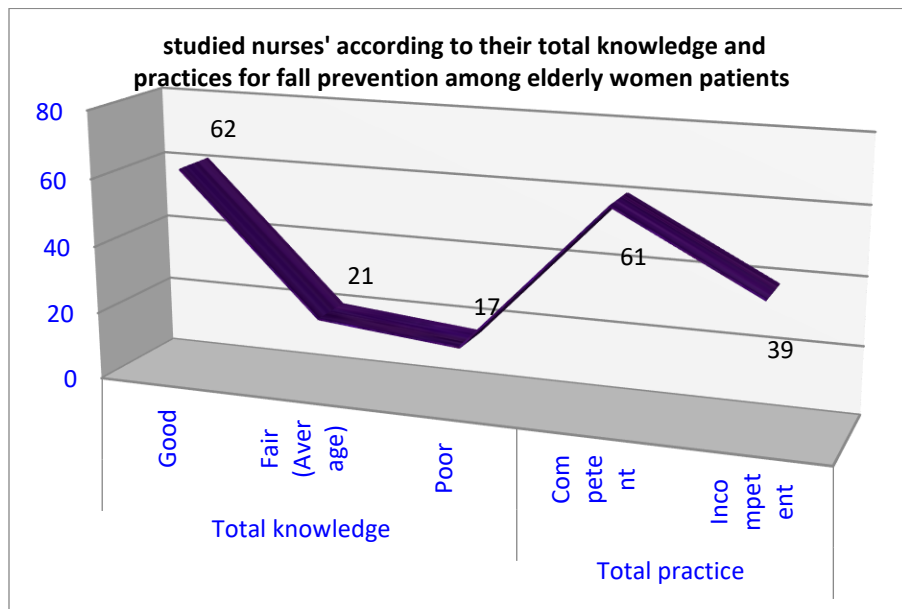**Figure 1:** Distribution of the studied nurses' according to their age and years of experiences (n=100).

Figure 2: Distribution of the studied nurses' according to their educational level and attending training programs about falling prevention and management (n=100).

		Total practice
Total knowledge	R	0.625
	P	0.001**

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

Table 1: Correlation between the studied variable (n=100).

Discussion

Aging is the gradual decline of biological functions and adaptation to stress over time. Aging affects every cell, organ, and tissue in the body, leading to increased risk of disease and death. Aging is associated with changes in skin, hair, teeth, gums, hearing, vision, bones, muscles, joints, heart, brain, and more. Aging is not a disease, but a natural and inevitable part of life that can be slowed down by healthy habits and interventions.

Ageing is the process of becoming older. The term refers mainly to humans, many other animals, and fungi, whereas for example, bacteria, perennial plants and some simple animals are potentially biologically immortal [22-27].

During early middle age, many bodily functions begin to gradually decline. Common conditions in older age include hearing loss, cataracts and refractive errors, back and neck pain and osteoarthritis, chronic

obstructive pulmonary disease, diabetes, depression and dementia [28-34].

As nurses comprise the greatest group of health care providers and are the ones responsible for the quality of care provided to the patients, their perspectives on the effectiveness of their care are very important, they should possess a wide variety of holistic skills and there is evidence of nursing interventions. [35-44]

Regards to training among the studied nurses, the result of present study more than half of them hadn't training; this result can be due to the lack of administrative support, increasing workload in a clinical area and lack of continues education regarding fall. This finding was matched with Elbasiony et al., (2021) who conducted study entitled "Effect of Implementing Fall Prevention Strategies on Nurses' Performance at Neurological Diseases Intensive Care Unit" and who found that majority of the studied nurses did not have the training [45].

The present study aimed to explore correlation between nurses' knowledge and practices regarding fall prevention among elderly women at Beni-Suef University Hospital. The results of the current study revealed that nearly two-thirds of the studied nurses have good level of total knowledge, competent practices in fall prevention total practices among elderly women patients during hospitalization. This is not surprise as according to the results of the current study 33.0% & 24% of nurses had technical and university education, respectively, that affect level of their knowledge. This is in agreement with the findings of Farag M. (2012) who found 3 types of nursing education relating to three types of nurses in Egypt today. The first level is carried out within high schools for nursing education akin to a sort of vocational education that takes place in lieu of high school (referred to as secondary level school in Egypt). The second level is carried out within a technical institute of nursing education (two years of after high school nursing education).The third or highest level is attained via a University college of nursing(students are trained over four years plus alone-year internship within a post-secondary school education or technical institute of nursing. [46]

Moreover, results of the current study declared that there is a highly significant positive correlation between the studied nurses' total practice and total knowledge. This may be attributed that most of them have from 5 to 10 years experiences in nursing that improve their knowledge and therefore their practices day by day. Additionally training proms therefore will improve their knowledge and practices. This outcome matched with study by Han et al., (2020) who illustrated that there was a strong positive association between total knowledge toward falls and Total practice [47]. Also, this finding supported with study by King et al. (2018) entitled "Impact of fall prevention on nurses and care of fall risk patients" and showed that same result [48].

Conclusion and Recommendation

There is a highly significant positive correlation between the studied nurses' total practice and total knowledge. It is recommended to improve in-services nursing knowledge and practices by implementation guidelines related to fall prevention in elderly patients.

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