



ORIGINAL ARTICLE

Assessment of the Nursing Aides Performance in the Care of Elderly Patients Admitted to Ali ibn Abi Talib Hospital of Zahedan

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ARTICLE INFO

Article history

Received: ???

Accepted: ???

Published: ???

Volume: x

Issue: x

Conflicts of interest: None

Funding: None

Key words

Elderly,

Nurse Aides,

Performance,

Admission

ABSTRACT

Introduction: Improving the quality of care for the elderly patients in the care units requires improving the performance of health care providers, such as nurse aides following the standard guidelines of caring in this area. In this regard, the present study was aimed to determine the performance of nurse aides in the safe care of elderly patients admitted to Ali ibn Abi Talib hospital of Zahedan in 2016. **Materials and Methods:** A quasi-xperimental study using a pre-test design was carried out with 50 randomly selected nurse aides in the hospital. The data were evaluated using a researcher made checklist of the nurse aide's performance in the care of the elderly patients in the care unit. Data analysis with Chi-square, Mann-Whitney, One-way ANOVA tests was carried out using statistical package for the social sciences software (version 16). **Results:** According to the Kruskal-Wallis test, work experience of the nurse aides had a significant correlation with their performance in preventing bed sores in elderly patients admitted to care units ($p=0.01$). According to the means comparison test, there was no significant correlation between the performance of the nurse aides regarding the infection control standards with the age of the elderly patients in the admission wards ($p=0.46$). **Conclusion:** According to the results of this study, work experience and education level are more effective in improving the level of performance of the nurse aides and in improving their performance in the care of the elderly in the care units.

INTRODUCTION

Healthy aging is the right of all people. Aging is a progressive, continuous, uniform and inevitable stage in the process of evolution, which begins from the moment of fertilization and continues until the end of life (1). Towards the end, mental and physical strength is significantly diminishing. At the beginning of the twentieth century, life expectancy in the richest countries was not longer than 50 years, but now this number has reached to 75 years (2). Unlike in the past, scientific advances in medicine, nutritional status, and therapeutic practices have led to an increase in the number of elderly people in different societies; in fact, the aging of the population is an important health achievement that will be a major challenge without proper planning to maintain the standard of life of the elderly.

Typically, 60 years and older is defined as the elderly group, but the World Health Organization (WHO) has presented a special categorization, such that 45-57 years is considered as middle age, 60 to 74 as old age, 70-75 as elder, and more than 70 years as very old. It appears that all the countries of the world have the elderly population; in the first half of the last century, it was shown that the global population aged 65 and older would rise more than 3 times

and will be about 4 billion in 2050. The United Nations estimated that the global population aged 65 and older will reach more than 4 times of the current percent (7.6%) and reach to 16.4% in 2050 (3,4). Elderly people suffer from multiple illnesses and generally take more medications compared to the others. For this reason, control, monitoring and evaluation of drug therapy for the older population is necessary as it is more complex and more critical than the drug therapy for younger people (5). The prevalence of drug complications is predominant in people over 70 years of age. Aging is accompanied by changes in absorption, diffusion, metabolism, drug excretion, pharmacodynamics, and increased drug interactions that are common in older people. In the United States, thousands of people die every year as a result of drug complications; the pharmaceutical costs go up to 77 billion dollar every year (6). Complications occur due to mistakes, such as prescribing wrong medication, failure to comply with the correct time of the drug intake, failure to follow the correct way of administering, using more than the prescribed dosage, making a mistake in calculating the dosage and drug delivery technique due to lack of familiarity with the patient (7). On the other hand, the highest mortality due to injuries is seen in people over 60 years because of aging and

the simultaneous physiological changes in vision, hearing, mobility, reflexes, circulation, and the ability to judge quickly (8). The sixth cause of death of the elderly is the incidence of accidents, such as falling in 47% of all cases, which is the main cause of injury in the elderly, especially women (9). More than one-third of people over 65 years of age and older experience falling, of which half of these cases occur several times (10). Another problem that the elderly is at risk is the bed sore that is known to be the third most expensive disorder after cancer and cardiovascular disease. Complications due to bed sores also increase the mortality rate (up to 55%) in the patients. In addition, the development of bed sores is accompanied by complaints and legal consequences because of the unsuccessful programs for its prevention in the elderly patients. Thus, the prevention of bed sores has been identified as an important clinical problem in healthcare and is one of the priorities for interventions of the nurse-aide (11,12). Caregivers protect from falling off the bed, pay attention to older people's speech, examine vital reflexes, and take appropriate measures to reduce mortality in the elderly.

The main objective of this study was to determine the performance of the nurse aides in ensuring safety in drug delivery, control of infections, and prevention of bed sore in the elderly patients in the intensive care unit of Ali ibn Abi Talib hospital of Zahedan.

MATERIALS AND METHODS

This research is a descriptive, analytical and cross-sectional study. The study population consisted of 50 nurse aides working in Imam Ali Hospital in Zahedan. Quarterly and random sampling was done from individuals using the entry (the individual is surely helpful) and exit criteria (the person does not work in the pediatric ward). The data gathering tool was a checklist set by the researcher. Chi-square test, Mann-Whitney U test, one-way ANOVA and mean comparison test were used for statistical analysis.

RESULTS

The findings of the study showed that 80% of the carers were female and the rest were male, of which 22 (55%) and 6 (60%) men. In terms of education, 37 (77%) of the experts were in excellent and desirable level and 2 (100%) high school graduates were in excellent and desirable level ($p=0.63$). Seventy-seven percent of the unmarried carers and 80% of the married carers performed in a high and desirable level. There was no significant relationship between these two groups ($p=0.75$). In the type of constant shift, 4 people (100%) and in the shift, 35 (76%) had a high and desirable level, which was not statistically significant ($p=0.57$). In terms of work shift, 18 people in morning (82%), 13 in the evening (73%), 8 in the night (80%) were in excellent and desirable level, which was not statistically significant ($p=0.41$) (Table 1).

Based on the above test, we found that there was no significant relationship between the work experience of the nurse aides and their performance in observing infection control standards ($p=0.46$) (Table 2).

Based on the above test, the performance of the nurse aides in controlling infection using standard guidelines had no significant relationship with work experience in subgroups of individuals with excellent, desirable and undesirable performance ($p > 0.05$) (Table 3).

Based on the above table, the difference in the performance of the nurse aides in taking care of drug delivery to the elderly patients of Ali Bin Abitaleb hospital was not statistically significant ($p=0.41$) (Table 4).

The mean and standard deviation of the overall performance of the carers were 26.21 ± 6.41 , which was related to the infection control standards (11.12 ± 3.48) (Table 5).

Based on the above table, the difference in the performance of nurse aides in preventing bed sores in elderly patients of Ali Ibn Abi Talib hospital was not statistically significant ($p=0.12$).

Table 1. Kruskal–Wallis test to determine the relationship between the work experience of the nurse-aides and their performance in observing infection control standards in elderly patients

Variable	Observing infection control standards				P value
	Excellent	Desirable	Undesirable	Very undesirable	
Work experience	7.44±7.04	7.44±6.07	5.45±4.44	4.44±4.04	0.46

Table 2. Mann-Whitney test to investigate the relationship between the performance of the nurse-aides in controlling infection with work experience in subgroups of individuals

Variable	Observing infection control standards				P value*	P value**	P value***
	Excellent*	Desirable**	Undesirable***	Very undesirable			
Work experience	7.44±7.04	7.44±6.07	5.45±4.44	4.44±4.04	0.47	0.31	0.44

Table 3. Comparison of safety in drug delivery to elderly patients of Ali Ibn Abi Talib hospital

Variable	Observing safe drug delivery				P value
	Excellent	Desirable	Undesirable	Very undesirable	
Nurse aides	24 (48%)	11 (22%)	15 (30%)	0	0.41

According to the above table, the performance of the nurse aides was excellent in observing safe drug delivery (48%) and prevention of bed sores (22%). The overall performance (excellence) of the healthcare providers was 22% (Table 6).

DISCUSSION

In this study, a quasi-experimental research method was used to evaluate the performance of the nurse aides in the care of elderly patients admitted to the care unit. In terms of demographic characteristics, the results of statistical tests showed that the majority of the nurse aides were female. In the study by Moghadas et al. in 1992, in relation to the attitudes of nurse aides in the care units of the hospital for euthanasia in Gilan, all the participants were female (13). Similarly, in the study by Aghajani et al. in 1998, 73.5% of the nurse aides were female. Studies conducted in Canada in 2007 showed that only 7.6% of the nurse aides in the care units were male (14).

According to the results of the study, in terms of marital status, 80% of the nurse aides were married. Regarding occupation status of nurse-aides, the results showed that 50% of the nurse aides were engaged in contract work. In the previous studies (13, 14), 30.3% and 34.67% of the nurse-aides were engaged in contract work, respectively, which is similar to the present study. Regarding work experience, the majority of the nurse aides had an experience of 6 to 7 years, similar to the mean work experience of 6.46 years of the personnel employed in the hospitals in Gilan (13). In addition, a similar study done by Koutzavekiaris et al. on the work experience of nurse aides on the prevention of infections in the

care units in Athens showed that the mean work experience was 6.4 years (15); it was similar to the present study.

Regarding the relationship between the demographic characteristics of nurse aides and their performance in safe care of the elderly patients in the hospital care units, the results of the study showed that there was a significant relationship between the work experience of nurse aides and their performance in safe drug delivery to the elderly patients. There was a significant and direct correlation between observing safety regulations of drug delivery with work experience in the subgroups with high performance, desirable function and undesirable performance (16, 17).

The findings of this study showed that most of the nurse aides had a good performance. It seems that a lack of well-being and high occupancy as a result of work-related fatigue are problems that should be addressed to the officials because it impacts the quality of care provision, either directly or indirectly. In a study by Laffretty and Morrison (2004), it is shown that the attitude of carers about working with seniors tends to be negative. In the present study, the disregard of the hearing and sight problems of an elderly person was one of the issues that led to great satisfaction of the elderly. McQueen (2000) stated in his research that the remoteness of the desired work conditions, the high volume of work, and the lack of time are the major factors in keeping the nurse aides away from the patient's bedside along with many of the issues that they themselves face, which makes it difficult to care for the patients.

CONCLUSION

According to the results of this study, work experience and education level are more effective in improving the level of performance of the nurse aides in the care of the elderly in the care units. It is suggested that more attention should be paid to the nurse aides with high work experience to improve the healthcare services of all the care units.

LIMITATIONS

The major limitation of the current study was that it was a single center study and the numbers of participants were less.

Table 4. Mean and standard deviation of the studied areas

Variable	Mean±standard deviation
Observing safe drug delivery	9.74±2.85
Prevention of bed sores	2.36±1.5
Decrease of injuries following falling	3.04±1.69
Observing infection control standards	11.12±3.48
Performance	26.2±6.41

Table 5. Comparison of bed sore prevention in elderly patients admitted to Ali Ibn Abi Talib hospital

Variable	Prevention of bed sores				P value
	Excellent	Desirable	Undesirable	Very undesirable	
Nurse aides	11 (22%)	17 (34%)	11 (22%)	11 (22%)	0.12

Table 6. General performance of nurse-aides in all the three checklists

Variable	Frequency (Percent)			
	Excellent	Desirable	Undesirable	Very undesirable
Nurse aides				
Observing safe drug delivery	24 (48)	11 (22)	15 (30)	0
Prevention of bed sores	11 (22)	11 (22)	17 (34)	11 (22)
Decrease of injuries following falling	12 (24)	21 (42)	10 (20)	7 (14)
Observing infection control standards	20 (40)	15 (32)	14 (26)	1 (2)
Performance	11 (22)	28 (56)	11 (22)	0

Further studies are needed to access additional information about the prediction of care performance of nurse aides for making better decision.

ACKNOWLEDGMENTS (FUNDING SOURCE)

This research is an extract of a research project with code 95449 and was funded by the Young and Elite Research Club.

AUTHOR CONTRIBUTIONS

All authors Contributed in this study equally.

CONFLICT OF INTEREST

None declared.

ETHICAL STANDARDS

This study approved in Zahedan University of Medical Sciences ethical committee.

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