



Nurses' Knowledge, Attitude, and Practice Regarding Pressure Ulcer Prevention for Intensive Units Patients at Public Hospitals in Sana'a city

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Abstract

Background: Pressure ulcer was a significant financial burden to any health care system and had adverse effects on achieving goals of care. Aim: to assess the nurse's knowledge, attitude and practices towards pressure ulcer prevention for Intensive Units Patients at Public hospitals (Al-Thawra and Al-Gumhory) in Sana'a city. Methods: Descriptive, cross sectional study was carry out to study nursing staff whom were working in ICU units at Al-thawra and Al-Gumhory hospital during 2019 year. The actual sample size is 183 of nurses available during the field study. Data-collecting instrument was questionnaire was included demographic characteristics and as face to face interview. Data ,coded, tabulated and analyzed by using SPSS software program (SPSS, Version 18.0.) for descriptive statistics and spearman test used to check the association between nurses job experience and their knowledge and practices. Results: In this study, the mean of the nurses age was 1.3 years. Above more than half (59%) had diploma of degree. The highest period of experienced between (1 – 5 years) was (82.0%). 54% of the nurses received training in pressure ulcer prevention. The majority of nurses' knowledge that work in Al-Thawra hospital and Al-Gumhory hospital (86% and 64% respectively) had average scored. As regards nurses' practice, (50%) of them work in Al-Thawra hospital scored average. On the other hand, the majority of Al-Gumhory nurses had good scores in practice. However, there were good scores attitude of nurses at both hospitals. The study Conclusion: As regards nurses' knowledge that work at Al-Thawra hospital, (10%) had good scores. On the other hand, nurses' knowledge at Al-Gumhory hospital had (25%) good scores. The present work recommended training programs should be conducted about pressure ulcer prevention for nurses who are working in ICU hospitals.

Key wards: Pressure Nurses, Prevention, Knowledge, Sana'a city.

Introduction:

Pressure ulcers are the common conditions among patients hospitalized in acute and chronic care facilities and impose significant burden on patients, their relatives and caregivers. Pressure ulcers have been described as one of the most costly and physically debilitating complications since the 20th century. 1,2 World stop pressure ulcer day report in 2014 showed that nearly 700,000 patients were affected by pressure ulcers each year. Around 186,617 patients develop a new pressure ulcer in acute care each year. This has shown that in the year January 2012 to

December 2013 between 4 and 6% of patients in acute care settings and more than 5–10% of patients in non-acute care had pressure ulcers. Pressure ulcers are accountable for 2% of preventable deaths.³ There are several factors contributing to the development of pressure ulcers. These included prior ulcers, peripheral vascular diseases, diabetic mellitus, smoking, prolonged immobility, poor nutritional status, incontinency, impaired sensation, and aging as intrinsic factors and pressure, shear, friction, moisture, poor moving, and handling as well as therapeutic devices as extrinsic factors. Nurses'

knowledge and attitude are also viewed as extrinsic factors for pressure ulcer formation.⁴ The presence or absence of pressure ulcers has been generally regarded as a performance measure of quality nursing care. skin care, it is important to appreciate that all aspects of caring for the skin must be addressed; one weak link in the chain can ruin all of your good efforts.⁶

Nurse, as a primary care giver should have the knowledge on pressure ulcer in order to carry out intervention necessary for prevention and management of complication of pressure ulcer.⁵

Aim of the study

To assess the level of nurses' knowledge, attitude, and practice regarding pressure ulcer prevention for Intensive Units Patients at Public hospitals (Al-Thawra and Al-Gumhory) in Sana'a city.

Materials and Methods

A descriptive cross-sectional study was conducted from October 2018 into April 2019. The target population of this study was conducted among nursing staff whom were working in ICU units at the Al-thawra and Al-gumhory hospitals during the study period. The total number of nursing staff at Al-thawra ICU and Al- Gumhory was 294. The sample size was calculated using Epi Info version 7.2. Based on the following assumptions (Reference population = 294, expected frequency = 50% based on the average of finding, precision 5%, CI 95%) to be 167, 9% of the calculated sample size had been added to overcome the possible dropout , so the actual sample size is 183 of nurses available during the field study. A self-administered questionnaire was applied as a method for data collection. The questionnaire was completed within 30 minutes. The instrument developed for the purpose of the study was a structured questionnaire consisting of closed and multiple choices questions. A questionnaire was divided into 4 sections namely; demographic characteristics of nurses, knowledge, attitude, and practice on pressure ulcer prevention. 8 items to assess the

subjects' demographic data include name of the hospital, nurse age, sex, Marital status, Basic of education, Formal training on pressure ulcer, current area of practice, and length of service. A pilot study was conducted on 10% of nurses using the same sitting and questionnaire to assess the clarity and feasibility of the study. A 17-item multiple choice questions for nurses' knowledge about Pressure Ulcer Prevention, 13-item questionnaire of nurses' attitude and 15-item structured questionnaire nurses' practice. The data was analyzed using SPSS software (statistical package for social science, version) version 21. The following statistical analysis were performed used descriptive analysis as frequency, percentage, and Mean \pm SD. Correlation (spearman) test was used to assess relations between nurse's knowledge, practice, attitude and their demographic characteristics. 95% confidence interval were calculated as appropriate and p value of <0.05 is considered significant. The content validity was established by a panel from Sana'a University, who reviewed the tools for clarity, relevance, comprehensiveness and applicability for implementation and according to their opinion some modifications were applied. The reliability of the questionnaire was tested by using . Cronbach's Alpha for the tool was found to be highly reliable data collection coefficient was (0.73). Ethical considerations as permission was taken from the responsible authority like Nursing department, director of hospitals, head of nurse in ICU units and oral consent from the participant in each hospital after explaining the aim of the study. also they assure that the information they provide will not be affect them.

Results

The study shows that the highest age of nurses between (25– 34 years) were (48.1%) with Mean \pm SD = 1.3425 \pm 0.55158. More than half of them their marital status were single. (55.2%) of the nurses were male and (44.8%) female. The highest level of education among nurses had diploma degree. More than half of the study sample work at AL-Thawra hospital and (22.4%) of them work in

emergency intensive care unit (ERICU). Well as, the highest period of experienced between (1 – 5 years) was (82.0%). Table 1.

Table 1 : Distribution of the nurses according their demographic characteristics

Variable	Categories	F	%
Age	24<	71	38.8
	25-34	88	48.1*
	35 +	24	13.1
Mean ± SD = 1.3425 ± 0.55158			
Marital status	Single	97	53.0*
	Married	82	44.8
	Widowed	3	1.6
	Divorced	1	.5
Gender	Male	101	55.2 *
	Female	82	44.8
Level of education	Diploma	108	59.0*
	Bachelor	72	39.3
	Master	3	1.6
Hospital of work	AL-Thawra	126	68.9*
	ALGumhory	57	31.1
Practice area	MICU	35	19.1
	SICU	25	13.7
	ERICU	41	22.4*
	Neuro-ICU	12	6.6
	Ortho ICU	31	16.9
	Pediatric ICU	22	12.0
	Renal ICU	17	9.3
	Experience Years	1-5	150
6-10		15	8.2
11 +		18	9.8

More than half of nurses (54%) received training about prevention of pressure ulcer were demonstrated in figure 1.

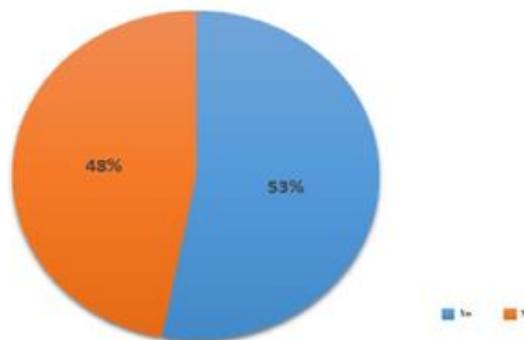


Figure 1: Training in pressure ulcer prevention

As regards to nurses' knowledge that work at Al-Thawra hospital, the majority of them (86%) scored average knowledge, (10%) had good scores, and only (4%) scored poor. On the other hand, nurses' knowledge at Al- Gumhory hospital had (64%) scored average knowledge, (25%) good scores, and only (11%) scored poor in figure2.

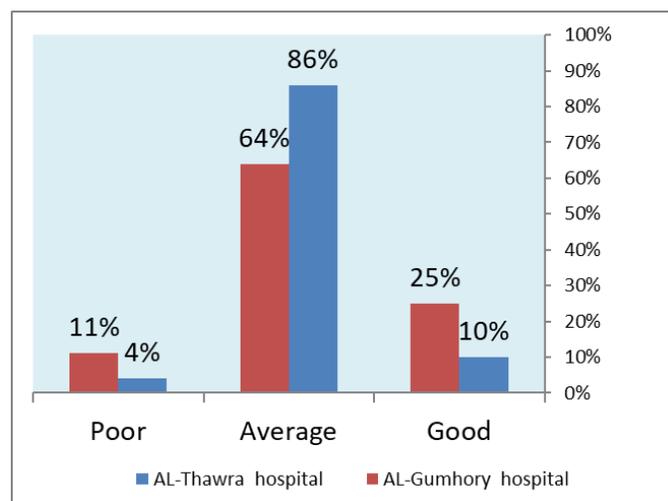


Figure 2: Nurse’s knowledge at Al-Thawra and Al-Gumhory hospitals

Regarding to nurse’s attitude at Al-Thawra hospital (40.98%) had good scores, (36.89%) scored average attitude, and only (22.13%) scored poor. On the other hand, nurses at Al-Gmhory hospital had (38.60%) good scores, (31.58%) scored poor, and only (29.82%) scored average attitude in figure 4.

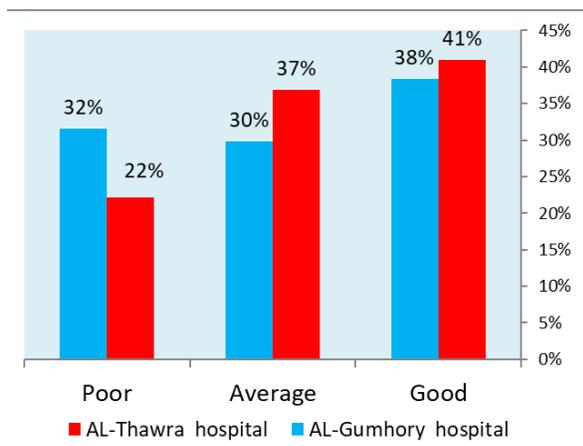


Figure 3: Nurse's Attitude at Al-Thawra and Al-Gumhory hospitals

The findings of the study shows that nurse's practice in Al-Thawra hospital had the majority of them (50%) scored average practice, (40%) good scores, and only (10%) scored poor. On the other hand, nurses at Al-Gumhory hospital had (49%) good scores, (31%) scored average practice, and only (20%) scored poor in figure 4.

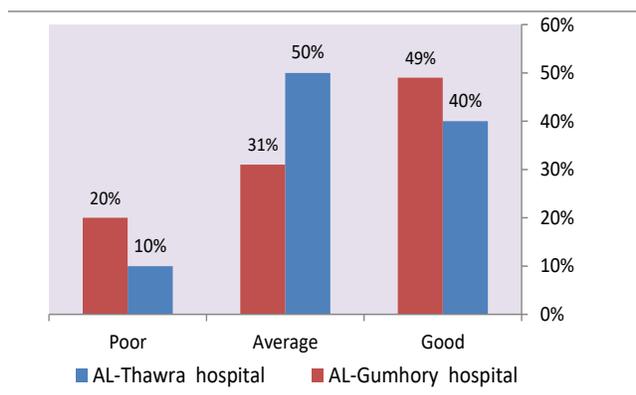


Figure 4: Nurse's Practice's at Al-Thawra and Al-Gumhory hospitals

It reveals that there is highly statistically significant relation between nurses' attitude and their practice (PI=0.01). Moreover, there is statistically significant relation between nurses' age and level of education with their receiving any formal training about prevention of pressure ulcer (PI=0.05). Table 2.

Table 2: Relations between nurse's knowledge, practice, attitude and their age, level of education and training.

Items		Knowledge	Attitude	Practice
Age	Correlation Coefficient	-0.009	-0.062	0.040
	P-value	0.906	0.403	0.592
	N	183	183	183
Level of education	Correlation Coefficient	0.060	-0.033	0.068
	P-value	0.419	0.655	0.361
	N	183	183	183
Received any formal training on pressure ulcer prevention	Correlation Coefficient	0.037	-0.018	-0.007
	P-value	0.620	0.804	0.928
	N	183	183	183

**Correlation is significant at the 0.01 * Correlation is significant at the 0.05 spearman test

Discussion

Pressure ulcers created several adverse effects, such as increased risk of infection, delayed wound healing, increased mortality, increased use of hospital resources & patient care costs, increased patients' length of hospital stay, pain , and suffering from the lower quality of life.6,7 Pressure ulcers have been labeled as one of the most expensive and physically debilitating complications in the 20th century, preventing pressure ulcers in any setting is linked to the quality of care provided in that venue. 8 In Yemen, lack of evidence on nurses' knowledge, Attitude, and practice of pressure ulcer prevention strategies used by the nurses. Therefore, this study attempted to assess the level of nurses' knowledge, attitude, and practice regarding pressure ulcer prevention for hospitalized patients at Al-Thawra and Al-Gumhory hospitals in Sana'a city. Well as, generate appropriate information that can be used by program managers and stakeholders in the prevention and interventions of pressure ulcer. In the present study, the male: female ratio is (55.2:44.8), while in Bangladesh study found that the male: female ratio (12.1: 87.9) and (48,1%) of nurses in this study were (25 – 34) years old, comparing to (56%) in Bangladesh study. In the relation to the marital status, (44.8%) of nurses were married in comparing to (100 %) in Bangladesh study.9 (90.2%) of nurses had experiences

between (1-10) years in our study comparing to (49.5) % in study done by Prince Songkla. Regarding to educational level, in this study (59%) of the nurses had diploma, while (78 %) of the nurses had diploma in Bangladesh study.⁹ Furthermore, (86%) of nurse's knowledge at Al-Thawra hospital had average scores in knowledge, (10%) good scores, and only (4%) poor scores. On the other hand, in Al-Gumhory hospital the majority of nurses' knowledge had (64%) average scores, (25%) good scores, and only (11%) poor scores. In previous study in Lahore, the nurse's knowledge that worked in general hospitals the majority of nurses (80.6%) had poor scores in knowledge, (11.1%) average scores, and only (8.3%) good scores.⁹ Another study in Bangladesh (92.3%) of nurses had poor scores in knowledge, (5.5%) average scores, and only (2.2%) good scores.¹⁰ Also, an study findings that lack of updating in nurses' education decreased the level of knowledge among nurses with many years' experience.¹¹ There was no significant relationship between knowledge and attitude regarding pressure ulcer prevention according to KAP model. Despite of the attitude factor affects based on nurses' knowledge. Our study findings support KAP model of previous study in Bangladesh which had no significant relationship between knowledge and attitude regarding pressure ulcer prevention. ¹⁰ This is in contrast with other study, which represents there was a significant relationship between knowledge and practice regarding pressure ulcer prevention among nurses in Lahore.¹² However, there was no significant relationship between knowledge and practice regarding pressure ulcer prevention among nurses. These findings agree with KAP model in previous study of Bangladesh reported there was no significant relationship between nurse knowledge and practice.¹⁰

Similarly, there was no relationship between Hong Kong nurses' knowledge and practice.¹³

Conclusion

We conclude that the highest level of education had Diploma were more than half of the sample had

experience period between 1 to 5 years. 54% of them had received training in pressure ulcer prevention. As regards nurses' knowledge that work at Al-Thawra hospital, (10%) had good scores. On the other hand, nurses' knowledge at Al- Gumhory hospital had (25%) good scores. However, one third of nurses' attitude had good scores in both hospitals. There is highly statistically significant relation between nurse's attitude and their practice ,well as levels of education ,age and received any formal training on pressure ulcer prevention.

Recommendations

Based on the results of the present study, can be recommended training programs should be conducted about pressure ulcer prevention for nurses who are working in ICU hospitals. Provide the necessary requirements to prevent of pressure ulcers. Established policies and guidelines in hospitals to promote nurses' attitude in relation to pressure ulcer prevention. Results of this study should be shared with stake holders such as nurse administrators, nurse teachers, nurse researchers, nurse clinicians, hospital administrators and the public. Replication study is recommended in other settings to promote the generalizability of the findings above.

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