Attitudes of Nurses towards Pressure Ulcer Prevention Guidelines at a Level 5 Hospital in Kenya

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Abstract

Introduction

Pressure ulcers pose a major challenge to quality of life, and increase the risk for mortality and morbidity. Numerous guidelines have been developed to prevent them, yet the global prevalence is 4.7-18.7%. The main aim of the study was to determine the nurses' attitude towards Nursing Council of Kenya (NCK) guidelines on pressure ulcer prevention.

Methods

This was a descriptive cross sectional study, whose target population was 400nurses in Embu County. The study population was 200 nurses working in Embu Level 5 Hospital. Two sampling methods, that is stratified random sampling followed by systematic random sampling were used. Sample size was 145 respondents and the tool for data collection was a questionnaire. Research permission was obtained from National Commission for Science Technology and Innovation (NACOSTI). Data was analysed using statistical package for social sciences version 21.

Findings

Majority (63.6%) of the nurses had a positive attitude towards the guidelines. Attitude had a significant association with knowledge on NCK guidelines at p=<0.05, but did not significantly influence adherence to NCK guidelines.

Conclusion

The researcher concluded that the attitude towards NCK guidelines was positive, and that nurse's knowledge of the guidelines influenced their attitudes positively.

Keywords: *Attitudes, Adherence, Knowledge, Pressure Ulcers, Prevention Guidelines*

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Accepted: 16 Sep 2021

Published: 21 October 2021

Introduction and Background

Pressure ulcers, recently referred to as pressure injuries, are a breakdown of the skin continuity secondary to continuous pressure (Hinkle & Cheever, 2014). They are associated with morbidity and mortality even though they are preventable (NPUAP et al., 2014). Past studies have demonstrated that, the prevalence and incidence of pressure ulcers are still high globally. Prevalence ranges from 4.7%-18.7% and incidence 23%-27.5% in hospitals. However, the incidence of pressure ulcers among patients admitted in nursing homes is slightly lower compared to that of hospitals, and it ranges between 12% and 25% (Shrestha, 2016).

According to Dilie & Mengistu (2015), in a study done in Ethiopia, majority of the nurses (68.4%) expressed positive attitude in pressure ulcer prevention and management. Their attitude however did not reflect on their practice. A descriptive cross-sectional study done in Jordan demonstrated that, most of the nurses had a positive attitude towards pressure ulcer prevention. Female nurses were found to score better in attitude, compared to their male counterparts. Majority of them, however, felt that prevention of pressure ulcers was a time consuming affair. Majority of the nurses had a belief that patients in the intensive care unit were not at any risk of pressure ulcer development (Laila, 2018).

A small percentage of nurses did not consider pressure ulcer prevention as requiring any priority in the management of the bed ridden patients. This study revealed that nurses who had received training on pressure ulcer prevention and those with many years of working experience, generally had better attitude scores, compared to those without these attributes. Nurses' education level, their ages and whether or not they had read articles on pressure ulcer prevention previously, did not have any significant relationship with their attitudes (Laila, 2018).

Another study which was done in Nigeria showed that most of the nurses (82.29%) who were interviewed, demonstrated a positive attitude towards pressure ulcer prevention. This attitude, however, did not reflect on the level of practice of pressure ulcer prevention interventions. There was an attitude practice mismatch after correlating the results on attitude and those on practice of pressure ulcer prevention. This was better accounted for, due to other factors which included low levels of staffing, insufficient knowledge of the nurses, unavailability of devices to relieve pressure and limitation of the working time (Uba et al., 2015).

Justification

Guidelines have been developed over the years by organizations such as The National Institute for health and Care Excellence (NICE) and National Pressure Ulcer Advisory Panel (NPUAP). The Nursing Council of Kenya (NCK) has not been left behind, and has developed pressure ulcer prevention guidelines through a manual of clinical procedures. This manual is revised from time to time and the latest version is dated 2019 (NCK, 2019). It is justifiable to study these locally available guidelines, and assess the attitudes of nurses towards them. This is because, if they are adhered to, the pressure ulcer prevention practice is likely to improve by leaps and bounds, thus reducing the incidence and prevalence of pressure injuries.

Objectives

i. To assess the relationship between demographic factors and nurses' attitude towards NCK pressure ulcer guidelines at Embu Level 5 Hospital.

ii. To determine nurses' attitude towards NCK pressure ulcer prevention guidelines at Embu Level 5 Hospital.

iii. To examine the association between attitude and adherence to NCK pressure ulcer prevention guidelines.

Methods

This study was conducted at Embu Teaching and Referral Hospital, a Level 5 County Referral facility, serving residents of Embu county and also referral cases from the neighbouring counties, such as Tharaka Nithi, Kirinyaga, Kitui and Machakos. The hospital had a 1000 bed capacity, serving specialized and general cases. Specialized units included ICU, and Renal units. The study utilized an institutional based descriptive cross-sectional research design. The study population totaled to 200 nurses, who were distributed in the various hospital departments and the calculated sample size was 145 nurses. The study utilized two sampling methods: First, utilized stratified random sampling method, with departments as the criteria for stratification, to ensure that the sample was representative of all the nurses. Secondly, systematic random sampling, to pick the respondents from each stratum.

The study included those nurses who were involved in day to day direct care of the patients, and those nurses who were willing to participate in the study freely. It also included those nurses who had worked for at least 2 months since their first appointments, because they had gone through the orientation process, and were familiar with the hospital protocols. The study excluded nurses in senior management positions, because they were not directly involved in care of the at risk patients. Nurses in horizontal specializations e.g. psychological counseling were excluded, because even if they were handling patients, their roles were more psychological than physical. Nurses who were not willing to participate in the study, by declining to sign the informed consent form, were also excluded.

The researcher conducted a pretest of the tool on 15 nurses, which was 10% of the total respondents. The pretest was done in Consolata Hospital Kyeni, which was a level 4 hospital at that time. The nurses were drawn from the medical, surgical, pediatric and maternity wards of the facility. Cronbach's alpha reliability test was run on the tool based on the pretest results, and a reliability coefficient of 0.751 was found.

Permission to conduct the research was obtained from NACOSTI, Embu County Health Offices, Hospital Chief Executive Officer and nursing officers in charge of the respective wards. Respondents were required to sign a consent form, as an indication of consent to participate in the study. The researcher utilized a semi-structured self administered questionnaire to collect data. The questionnaire had Likert scales which were used to determine the nurses' attitude towards the NCK guidelines and the levels of adherence to the pressure ulcer prevention guidelines. The tool was administered after nurses completed their shifts, to ensure that they gave maximum attention to it, and those who were very tired were allowed to carry it home, and fill it once relaxed. The researcher ensured completeness of the tools before formally receiving them from the participants, and clarified any misconceptions concerning the questions. The tool required an average of 15 minutes to complete.

Finally, editing was done on those questionnaires with minor mistakes e.g. wrong departmental names, in preparation for data entry. Data was then entered into Statistical Package for Social Sciences version 23 for analysis. The computer for data analysis was password protected for privacy purposes. Quantitative data was organized then standardized before coding. Descriptive statistics were used to analyze data e.g. mean, and standard deviation, percentages, frequencies and range. The null hypotheses were tested using chi square, to determine if any statistical significance existed between the variables of the study at p value of <0.05.

Results and Discussion

Demographic factors and nurse's attitude

The total number of questionnaires that qualified for data analysis was one hundred and eighteen which represented an average response rate of 81.4%. Most respondents came from the medical-surgical units and the maternity, i.e. 23.7% (28) came from the medical department, 17.8% (21) from maternity and 15.3% (18) surgical units, which collectively formed more than 50% of the respondents. The other departments contributed to less than 9% each. Results indicated that 36% (43) of the respondents had worked for less than one year, 22% (26) had worked for one to two years, while 42% (49) of the respondents had worked for more than two years in their respective departments. Majority of the respondents had a diploma in nursing with 62.7% (74) and those with a basic degree were 28% (33), while 8.5% (10) had a certificate in nursing. Majority of the nurses i.e. 71.2% (84) had high knowledge level of the NCK pressure ulcer prevention guidelines, while 28.8% (34) had moderate knowledge level. The mean score was 87.4%, range 55-100% and standard deviation was 8.9.

Table 1: Demographic Factors

Variable	Frequency (n)	Percentage (%)
Department of work		
• Medical	28	23.7
• Maternity	21	17.8
• Surgical	18	15.3
• Others	51	43.2
Total	118	100
Duration of work		
• <1 year	43	36
• 1-2 years	26	26
• >2 years	49	42
Total	118	100
Academic qualification		
• Certificate level	10	8.5
• Diploma level	74	62.7
• Degree level	34	28.8
Total	118	100

Knowledge of NCK guidelines		
• High knowledge level	84	71.2
• Moderate knowledge level	34	28.8
Total	118	100

Out of these demographic factors namely, the department of work, duration worked in respective departments, academic qualifications and knowledge level of NCK pressure ulcer prevention guidelines, knowledge level of NCK guidelines was found to significantly influence nurses' attitudes at χ^2 (1, N=118)=4.296, p=0.038). There was weak positive relationship between knowledge and attitude at Cramers v 0.19, where those with high knowledge level were 2.9 times more likely to have a positive attitude (OR=2.944, CI=1.028-8.425). This finding was congruent with that of Laila (2018), who found that nurses with prior training in pressure ulcer prevention, demonstrated better attitude scores.

Table 2: Association between Knowledge of NCK Guidelines and Attitude

Variable	**Category**	**Nurses' attitudes**		**Total**
		Positive	**Negative**	
Knowledge of NCK pressure ulcer prevention guidelines	High knowledge	68	33	101
	Moderate knowledge	7	10	17
Total		75	43	118

χ^2 (1, N=118) =4.296, p=0.038)

A. *Attitudes of Nurses Towards NCK Pressure Ulcer Prevention Guidelines*

A five point researcher developed Likert scale, was used to assess the respondents' attitudes towards the guidelines. The scale had five statements to which nurses responded as: strongly agree, agree, not sure, disagree and strongly disagree. These responses were coded as 5,4,3,2 and 1 respectively. The fifth statement of the Likert scale i.e. "general knowledge of nursing can replace NCK guidelines on pressure ulcer prevention" was reverse coded before analysis.

Table 3: Responses Towards Likert Statements for Testing Attitude

Statement	SA	A	NS	D	SD	TOTAL
NCK guidelines are necessary for effective pressure ulcer prevention	55.1%	41.5%	0.8%	0.8%	1.7%	100%
Adherence to NCK pressure ulcer prevention guidelines can reduce prevalence of	62.7%	30.5%	2.5%	3.4%	0.8%	100%

pressure ulcers						
Nurses should lead in the adherence to NCK guidelines	62.7%	30.5%	3.4%	0.8%	2.5%	100%
Nurses bear greatest responsibility in pressure ulcer prevention	59.3%	34.7%	1.7%	2.5%	1.7%	100%
General knowledge of nursing can replace NCK guidelines	11%	16.9%	14%	35%	22%	100%

Key: SA-Strongly agree, A-Agree, NS-Not sure, D-disagree, SD-Strongly disagree Table 3 above shows that majority of the nurses strongly agreed that, guidelines are necessary for pressure ulcer prevention, adherence to NCK pressure ulcer prevention guidelines can reduce the prevalence and incidence of pressure ulcers, nurses should be on the forefront in adherence to those guidelines, and that nurses bear the greatest responsible in pressure ulcer prevention. On the other hand, a great majority disagreed that general knowledge of nursing can replace the NCK pressure ulcer prevention guidelines.

A variable called “attitude score” was computed, based on the individual responses towards the Likert statements. The highest possible score was obtained by summing the codes for the different response categories. For instance, if someone strongly agreed with all the statements, their score would be (5 multiplied by 5), since the code for “strongly agree” was 5, and the statements were five in number, making the maximum possible score as 25. Those who scored ≥20 were considered to have a positive attitude, while those who scored below 20, were considered to have a negative attitude. Those with a positive attitude were 63.6% (75) while those with negative attitude were 36.4% (43).

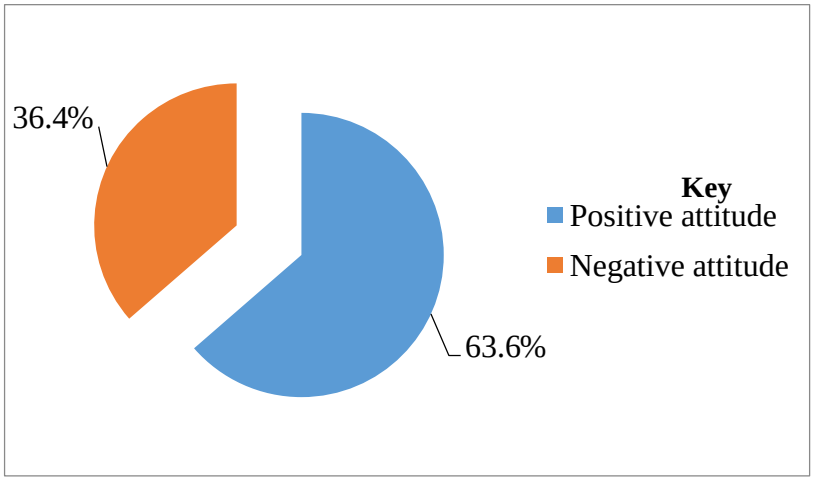

Figure 1: Attitudes of Nurses Towards NCK Pressure Ulcer Prevention Guidelines

Majority of the nurses (63.6%) had a positive attitude towards the NCK guidelines. This finding was different from that of Uba et al., (2015), whereby the nurses with positive attitude towards pressure ulcer prevention guidelines were 82.29%.

However, this finding was close to that of a study done in Ethiopia by Dilie and Mengitsu (2015), which found 64% of nurses with a positive attitude.

Association between Attitude and Adherence to NCK Pressure Ulcer Prevention Guidelines

The attitude scores were correlated with adherence scores, which revealed a mild negative association between attitude and adherence. The association was not statistically significant at 95% confidence level. This agreed with Uba et al., (2015) that attitude did not reflect on the level of adherence.

Table 4: Correlation between Attitude and Adherence

		Attitude score	Adherence score
Attitude score	Pearson Correlation	1	-.037**
	Sig. (2-tailed)		.692
	N	118	118
Adherence score	Pearson Correlation	-.037	1
	Sig. (2-tailed)	.692	
	N	118	118

**Finding is insignificant at 95% confidence level

Conclusion

The researcher concluded that, majority of the nurses had a positive attitude towards NCK pressure ulcer prevention guidelines; knowledge level on NCK guidelines was significantly associated with attitude and that attitude was not a reliable predictor of adherence to NCK guidelines.

Recommendation

The hospital management should organize refresher trainings on pressure ulcer prevention.

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