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PERCEIVED INFLUENCE OF NURSE-PATIENT RATIO ON THE IMPLEMENTATION OF NURSING PROCESS AMONG NURSES AT TENWEK HOSPITAL, BOMET COUNTY.

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Abstract:-

Objectives. ; To determine perceived influence of nurse patient-ratio on the implementation of the nursing process among nurses at Tenwek Hospital

Design: This was a cross sectional descriptive study which is both qualitative and quantitative in nature.

Setting; The stratified departments at Tenwek hospital which is not a public institution. **Subjects/participants;** Study the population of interest to the study consisted of the nurses working at Tenwek Hospital. These are the health workers who are employed by Tenwek Hospital Board. They were chosen since they are the group that is directly involved on implementation of the nursing processes (NP) at the hospital and are aware of the situation in the hospital. Data was collected between 13th May 2014 to 20th May 2014.

Main outcome measure; Nurse patient ratio, Number of patient admitted to departments, initiation of NP and implementation of all steps of NP.

Results: Findings on Nurse-patient ratio revealed that 81.0 % of the departments had a nurse- patient ratio of 1; 9 (one nurse per over nine patients and the least responses 5.6%, were nurses with ratios of three patients per one nurse, (1:1-3). These findings explain the nurse workload and the direct relationship on implementation of NP. 34.8% disagree and 19 % strongly disagree that working hours promotes implementation of NP. Majority recommended hiring of more nurse to meet the demand for nurses to carry out NP for every admitted patient at Tenwek Hospital.

Conclusion: The findings of the study indicated that low nurse patient ratio contributes to heavy nurse-workload which on the other hand it is perceived to contribute to impartial implementation of NP at Tenwek Hospital. This indicates a huge gap that requires both policy makers and the hospital administrators to address urgently.

Key words: nursing process, implementation, nurse patient-ratio.

INTRODUCTION;

NP functions as an important part of the multidisciplinary team, speaking to the physicians and nurses for the delivery of quality nursing care. It is practised within a systematic, goal-directed framework and a reasonable assurance that the individual's course along the health/illness continuum is predictable and progressive. An oversight or omission in any of the steps of NP may lead to less than optimal nursing care though in most cases there is poor implementation of the NP in the country as indicated by (MoH, 2009). At Tenwek Hospital, NP is implemented by nursing student as a learning objective but noted not implemented by nurses. The researcher made the observation from over a period of 10 years from 1999 when doing the diploma and degree studies consecutively to date. This was confirmed with observations of 80 charts of patients admitted to both medical and surgical departments, maternity and baby unit.

Materials and Methods

Study design: This was a cross sectional descriptive study which is both qualitative and quantitative in nature
Cases; Participants/respondents; are **all** nurses who were on duty at the time of study as from 13th to 15th May 2014 and were willing to participate without coercion.

Controls: Various departments were taken as the strata and from each strata, a sample proportional to the population in the strata was selected according to scientific Fishers formula which was employed for convenience and accuracy purposes. The distribution of the 98 nurses from the 8 departments out of study population of 150 nurses was selected as recommended by Yamane (1967).

Procedure of data collection; Procedure of data collection; A stratified random sampling method was used give equal chance to the selected respondents to participate in the study.

Participants' consent; The study participants were helped by the researcher to go through the study tool which was a structured self-administered questionnaire and informed that they were free to stop even at the middle of filling questionnaire. They were informed about the general purpose of the study and their rights to accept participation or not and also were informed of their rights to withdraw while in the process of the study.

Data analysis; Data was analyzed through coding against each and every objective of the study depending on the responses given were coded using the SPSS software to provide ease of analysis, minimized margin of error, and provide accuracy during analysis. These are ways to help transform a mass of raw data into tables and charts, with frequency distribution and percentages so as to make sense of the data.

Ethical consideration: The researcher has responsibility to protect the human rights of the study participants as prescribed in research ethics codes and guidelines. Approval from Kenya Methodist University Institutional Research Board was obtained and presented to Tenwek Hospital institution seeking for permission to conduct the study.

Results:-

Perceived Nurse Patient Ratio

Nurse patient ratio	Frequency
1:1-3	5(6%)
Total	6(7%)
1:4-6	6(7%)
1:6-9	72(81%)
ratio above 9 patients per nurses	89(100%)

Data obtained indicates that majority of the respondents had a nurse patient ratio of 1; 9 (one nurse per over nine patients, 81.0 %, (n=72). The least responses were nurses with ratio of three patients per one nurse, (1:1-3) 5.6%, (n=5). The nurse patient ratio range between 1:3 to 1: 9 and above.

Average number of patients admitted to department each day

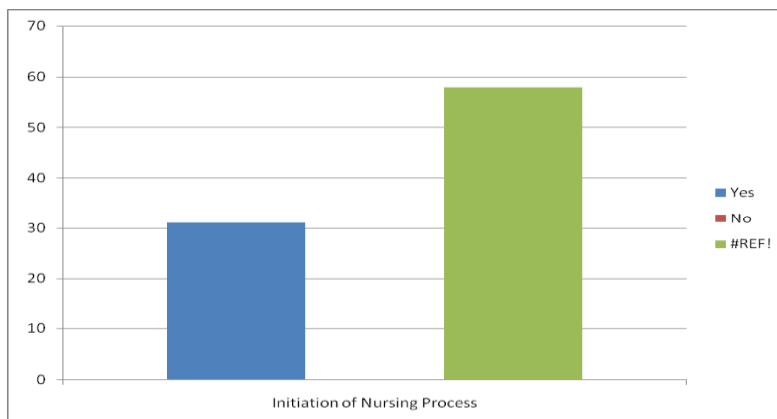
Departmental Responses		number of patients admitted per department			Total
		0-5	6-10	11 and above	
department Casualty	Count	1	3	3	7
	% of Total	14.3%	42.9%	42.9%	100.0%
Maternity	Count	4	6	2	12
	% of Total	33%	50%	17%	100.0%
Neonatal intensive care unit and paediatric ward	Count	5	5	3	13
	% of Total	38%	38%	23%	100.0%
Intensive care unit and High Dependency unit.	Count	8	2	2	12
	% of Total	66.7%	16.7%	16.7%	100.0%
Medical and Surgical/wound ward Nurses	Count	9	11	5	25
	% of Total	36.0%	44.0%	20.0%	100.0%
Eye department	Count	0	3	2	5
	% of Total	0.0%	60.0%	40.0%	100.0%
Recovery unit	Count	0	2	6	8
	% of Total	0%	25.0%	75.0%	100.0%
Orthopaedic Ward	Count	2	5	0	7
	% of Total	29%	71%	0.0%	100.0%

The findings showed that the departments which admitted the highest number of patients per day are OR/recovery 75 % (n=6) of respondents admit over 11 patients perday, medical surgical wound wards admit 44% (n=11) respondents admit 6-10 patients per day and20 % (n=20) admit over 10 per day.

Initiation of nursing process for EVERY admitted patient

The research wanted to establish if the respondents initiated nursing process for EVERY admitted patient and if they do initiate then at what time limit do they initiate.

Responses	Frequency
Yes	31(35%)
No	58(65%)
Total	89(100%)



Majority 65.2% (n=58) of the respondents do not initiate the nursing process for every admitted patient, however, 34.8% (n= 31) of the participants reported that they do initiate the nursing process for every admitted patient in their job.

Initiation Time of nursing process while the respondents were on Duty

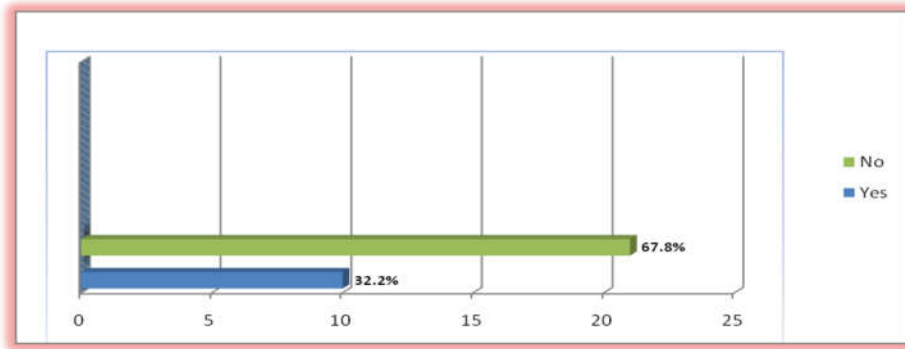
		At what time do you initiate the nursing process			
		Within the first 4 hours	Within 8 hours	within 12 hours	Total
Nursing process for EVERY admitted patient	Count responses	25	6	0	31
		81.0%	19.0%	00.0%	100%

Majority 81.0 %, (n=25) of the respondents initiated nursing process for every admitted patient within the first 4 hours and the least 19.0%, (n=6) were those who initiated it within 8 hours. However, none of the respondents initiated within 12 hours.

Implementation of all the steps of nursing process

The researcher sought to establish if all the steps of nursing process were implemented by the respondent who agreed that they initiate the nursing process for all admitted patients

	Frequency
Yes	10 (32.2%)
No	21 (67.7%)
Total	31 (100.0%)



In testing the implementation of all steps of the nursing process, majority 67.7 % (n=21) of the respondents do not implement all the steps of the nursing process, but 32.3% (n=10) indicated that they implement all steps of the nursing process.

Relationship between Nurse-patient Ratio and the Implementation of the nursing process at Tenwek Hospital.

	Value	Do	Asymp. Sig. (2-sided)
Pearson Chi-Square	5.697 ^a	6	.538
Likelihood Ratio	8.829	6	.183
Linear-by-Linear Association	.340	1	.560
N of Valid Cases	83		

Testing at 5% significant level, 2 tail, $(0.05/2)=0.025$, asyp value (sig) less than 0.025, Reject the null hypothesis. It means that the *p* value (significance) in the table is 0.538 a value more than 0.025; hence reject the null hypothesis meaning that nurse patient ratio does influences the implementation of the nursing process.

Discussion: Most of the respondents 43.8%, and 34.8 % strongly disagree and disagrees respectively that Nurse patient ratio is adequately proportional for the implementation of nursing process. 9.0% strongly agree and 12.4% agrees respectively with the nurse patient ratio proportion as adequate on implementation of nursing process. Findings on Nurse-patient ratio, majority of the departments 81.0 % had a nurse- patient ratio of 1; 9 (one nurse per over nine patients and the least responses 5.6%, were nurses with ratios of three patients per one nurse, (1:1-3). These findings explain the nurse workload and the direct relationship on implementation of nursing process. 34.8% disagree and 19 %strongly disagree that working hours promotes implementation of nursing process.

On evaluation of working hours, 71.9 %, of the respondents had their average working hours between 9-12 hours per day followed by 16.9 %, who have 5-8 hours and the least 11.2 %, working the longest between 13-16 hours per day. Working hours range between 8-16 hours and the mean is 8 hours. Working hours is provided by Tenwek policy according to Kenya labour laws to be 40 hours per week. However, 34.8% agreed and disagreed on working hours as supportive to implementation of nursing process. The answers depended on where the respondent is deployed since the policy on working is available on every nursing station.

Thematically on initiating nursing process, 65.2% do not initiate the nursing process for every admitted patient and 34.8% do initiate the nursing process for every admitted patient on their shifts, on the other hand, Out of the 31 respondents who initiate the nursing process, 67.7 % of the respondents do not implement all the steps of the nursing process, but 32.3% indicated that they implement all steps of the nursing process. This is a clear indication that all the phases of the nursing process are not implemented and therefore patients’ needs are not met. The respondents attributed the failure to initiate nursing process to heavy workload which made it impossible to carry out holistic individualized care for the patients.

The study corresponds with studies done in South Africa by Pubudu (2011), Ethiopia by Aseratie (2011) and Australia by Allen, and Cooper (2012) where the respondents attributed their reasons of not implementing nursing process to heavy workload, low nurse patient ratio, and dynamism in health sector that intensified longstanding problems within the nursing work environment as evidenced by nursing retention problems.

The study findings also agrees with research findings by Mulele (2014) that the respondents felt that the proportion of nurse to patients was revealed to be 1:12 which was extremely higher than the recommended ratio by the WHO which states a ratio of 1:6. a ratio of 1:1 or 1:2 would suffice these patients care needs. The author went ahead translate that the staffing in the department was extremely inadequate which would directly affect the nurse’s use of time on duty.

The researcher concludes that the nurse patient ratio is a challenge to Tenwek Hospital administration since hiring of Nurses is pegged on income generated at the Tenwek hospital is inadequately proportional for the implementation of the nursing process. Whereas the guidelines and procedures on patient care motivates nurses to establish nursing process

Recommendation:

Concerning nurse patient ratio which aggravates nurses' work indicates that there is evidently high patient nurse ratio and majority of nurses do not initiate nursing process for every admitted patient. The researcher recommends that the Hospitals management team and the Board of managements should urgently review the hiring policy to meet the demand for more nurses to be taken on board to relief the nursing shortage at the hospital within three months.

This will enable nurses to meet their daily operations and ensure patient-centred care is achieved through nursing process. Contemporarily, this will facilitate the quality of nursing services offered as well as the implementation of nursing process in the health sector. The researcher also recommends that the WHO and Nursing council of Kenya should look at the policy on nurse patient ratio and consider patient acuity rather than the number of nurses per patient within 12 months.

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