

NURSE'S KNOWLEDGE REGARDING TRIAGE SYSTEM AT EMERGENCY DEPARTMENTS IN PUBLIC HOSPITAL AT KHARTOUM STATE

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Abstract –

Introduction: The assurance of the best possible care in emergency situations depends on the implementation of a rapid triage system and strapping knowledge of triage among nurses. The aim of the study was to assess nurses' knowledge regarding triage system Methods: is a descriptive cross- sectional, Hospital based- study design. A sample of 168 nurses was selected from the emergency department of Khartoum state teaching hospitals by using the method of probability sampling. Data was collected by face to face interview questionnaire. The data was analyzed by statistical packages of social sciences version 16 and was presented in the form of simple frequency table. Results: The common age 20-25 years,(41.7%),It was sum that a (26.8%) of participant were not familiar with term triage, (67.9%) were define triage correctly , only (10.7%) receive knowledge about triage from universities program, most of participants (71.4%) did not know the appropriate approach to prioritize the patients, there is statistical significant with qualification (p value 0.000).shortage of qualified staff was the great challenges .Conclusion: the study concluded that triage system did not provided by any academic program nurses did not know the proper method for sorting patient

Key word - Triage .Nurses. Emergency

I. INTRODUCTION

A process used to determine the severity of illness or injury and to prioritize patients according to the needs for medical care, irrespective of their order of influx or other factors including gender, age, and socioeconomic status is known as triage. An effective triage system aims to ensure that emergency department patients “receive appropriate attention, in a suitable location, with the requisite degree of urgency “. Triage ensures that emergency care is initiated in response to clinical need rather than order of arrival. Triage aims to promote the safety of patient by ensuring that timing of care and resource allocation is requisite to the degree of illness or injury.¹

Triage is the point at which emergency care begins. The Australian college for emergency medicine [ACEM] state that triage should be performed by a “suitably experienced and trained registered nurse or medical practitioners”. The Commonwealth Department of Health and Family Service and ACEM 1997 advocate that patients presenting to the emergency department should be triaged by “an appropriately skilled health care professional “ACEM acknowledge that triage is usually performed by an “appropriately experienced registered nurse“.²The emergency severity index [ESI] is a five level triage scale developed by emergency department physicians Richard Wuerz and David Eitel in United States.²

Triage system in Sudan in 2001, triage-based emergency care was introduced by the Federal Ministry of Health into the three largest hospitals in the country (Khartoum Teaching Hospital, Khartoum North Teaching Hospital, and Omdurman Teaching

Hospital), as a possible solution to the increased morbidity and mortality observed in non-triaged patients. In the former system, both urgent and non-urgent patients were seen directly by the very junior doctors (house-officers) together in the same clinic. With the new triage-based system, patients are initially assessed by a nurse who performs primary triage and then transfers them to the appropriate different levels of care.³

Triage knowledge among nurses is one of the key elements of supervision in emergency department, if it is not carried out at standard level; the outcomes of clinical care of patients and efficiency of emergency departments get compromised.⁴

Applying a triage system has been proven to improve management and outcome for patients as well as minimize loss of resources in the emergency room. Sudan is a developing country faced by high demand for health services, during which sometimes the situation is categorized as critical, making it necessary to apply a well established triage system. It is necessary to evaluate the current attempts of triaging and evaluate nurses' knowledge.

II. METHODS

Descriptive cross- sectional, Hospital based- study design was used. The study conducted at the main public hospital (Khartoum Teaching Hospital, Khartoum North Teaching Hospital, and Omdurman Teaching Hospital).all nurses worked in emergency unit were enrolled in the study (168nurse),regardless of qualifications and years of experiences .Data was gather through interviewing questioner which composed of two sections: demographic data and

knowledge of nurses .Data was analyzed by computerized program (SPSS) version 16 and presented in form of simple frequency table and cross table to explore the relationship between variables. P value as statistical test was used (P value 0.05 was consider significant).ethical approval was obtain from three hospitals and verbal inform consent from the participants was taken after in depth clarification of the objective of the study .

III. RESULT

Demographics	Frequency	Percent
Age Groups		
20-25	69	41.0
26-30	70	41.7
31-35	16	9.5
36-40	13	7.8
Total	168	100.0
Nurse qualifications		
diploma	76	45.2
B.Sc	87	51.8
M.Sc	5	3.0
Total	168	100.0
years of experience in the ER		
Less than 1years	91	54.2
1-2	37	22.0
3-5	24	14.3
More than 5 years	16	9.5
Total	168	100.0

Table 1: Demographics characteristics

			Level of knowledge			Total
			Go od	Fai r	Po or	
Qualifi cation	Dipl oma	Co unt	4	53	19	76
		%	2.4 %	31. 5%	11. 3%	45. 2%
	B.Sc	Co unt	25	59	3	87
		%	14. 9%	35. 1%	1.8 %	51. 8%
	M.S c	Co unt	3	2	0	5
		%	1.8 %	1.2 %	.0 %	3.0 %
Total		Co unt	32	11 4	22	168
		%	19. 0%	67. 9%	13. 1%	100. 0%

(p value 0.000)

Table 2 The association between qualification and knowledge about definition of triage

Years of experience		Level of knowledge about definition of triage			Total	
		Good	Fair	Poor		
Less than 1 year	Count	6	65	20	91	
	%	3.6%	38.7%	11.9%	54.2%	
1-2	Count	16	20	1	37	
	%	9.5%	11.9%	.6%	22.0%	
3-5	Count	5	18	1	24	
	%	3.0%	10.7%	.6%	14.3%	
More than 5 years	Count	5	11	0	16	
	%	8.4%	6.5%	.0%	14.9%	
Total		Count	32	114	22	168
		%	19.0%	67.9%	13.1%	100.0%

definition of triage

(p value 0.000)

Table 3 The association between years of experience and Level of knowledge about definition of triage

Table 4 Challenges of Applying Triage Properly.

Challenges	Frequency	Percent
Lack of trained/qualified nurse	83	49.4
Lack of equipment	34	20.2
Increase number of patients	23	13.7
No system	28	16.6
Total	168	100

IV. DISCUSSION

Majority of nurses (82%) their age was distributed between 20-30 years it indicate that most of nurses were newly graduated, more over (54.2%) of nurses worked less than one year, same Ethiopian result revealed that 48% work less than on years⁵ while Tanzanian study conducted to assess nurses knowledge regarding triage had results of 47% of nurse work less than one year⁶ in addition to they were employed as national serves because of most senior staff have been migrated or working in privet hospital related to financial issue . Gender distribution showed that, females were (85.7%) and male were only (14.3%), this areal situation in Sudan as the male are relatively new emerge in the nursing specialty this is different from Ethiopian study where female relatively equal to male in same study with same of present study⁵ .

In the recent study 50% of nurses with bachelor degree, (45.2%) with diploma, and only (3.0%) with master degree this result different from result revealed from Ethiopia 74% of nurses with bachelors' degrees and from Australia 94% of nurses with diploma degree⁵ . Ghana 15% bachelors' degrees 50% diploma and 33% with certificate⁷ . This difference might be due to education policies that their respective government follow based on their human resource and qualification needed to fulfill their country demand concerning health.

In this study .most of nurses (73.2%) were familiar with the term "triage" while (26.8%) of them were didn't , because the triage system was not included in

all academic nursing program at university level even at services level. Tanzania study had relatively same result that 33% of nurses not familiar with term triage⁶

Nurses have not enough chance for training only; 17% received training courses. As Triage nurse must have appropriate training and experience in emergency nursing triage, decision making and emergency nursing cares⁷ A study carried out in Australia, reported different result 42% of nurses did not receive triage training and 14% said they were not yet sufficiently prepared to take up this assignment despite attending the triage classes⁷

The current study showed differences in level of knowledge scores with regard to nursing qualification p-value 0.000, nurses with diploma degree as triage not included in their curricula fail to define the term triage.

In the recent study the result revealed that negative statistical association between years of experience of nurses and their Level of knowledge about definition of triage P value 0.000, those who works less than one year fail to define triage correctly while of one to two years of experience define the term triage even fairly this result agreed with Tanzanian study and different with study conducted in Ghana which have positive statistical association with years of experience⁸ (Ghana)

Inadequate knowledge about proper methods of sorting patients lead to miserable outcome,

In the present study nurses have different methods not on scientific base (28.6%) using ABCD approach, (16.0%) using vital signs and (55.4%) most of participant using severity of disease, the last option depend on nurses view which didn't mention in any international triage the result reveal that there is statistical significant with gender (p-value 0.01) and with qualification

(P value 0.00).

Air way obstruction takes apriority whenever triage system adopted . In the recent study nearly 45% of nurses (bachelors nurse) take airway obstruction as priority there was statistical significance with qualification (P value 0.00).

All nurses agreed that shortage of qualified triage nurse play a major role in Applying the triage system

properly as 83.3% of nurses agreed that no proper system was adopted

CONCLUSION

Nurses who participated in this study demonstrated significant deficits in knowledge regarding patients' triaging in the emergency. To correct these deficits, immediate in-service training/education workshops should be carried out, followed by continuous professional development on a regular basis, including refresher training, supportive supervision and clinical skills session.

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