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Original Research Article

Assessment Of Nurses' Knowledge Regarding Gcs Among Staff Nurses Working In Emergency Department And In-Patient Department In Tertiary Hospitals In Odisha

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ABSTRACT:

The Glasgow coma scale is a tool in medical profession, used to objectively evaluate the degree to which a person is unconscious or comatose. It is essential that every nurse working in the areas which needs critical care such as high dependency units, has enough knowledge to assess and intervene appropriately and he or she should also be able to communicate any changes in the condition for multidisciplinary intervention. Conducted a study "Assessing nurses' knowledge regarding GCS among staff nurses working in emergency department and inpatient department in the tertiary care hospital, Bhubaneshwar Odisha. The study objective was assessing the previous knowledge level and the association between pretest knowledge and selected demographic variables Off Glasgow coma scale among staff nurses working in emergency and in patient department. Total 100 staff nurses who satisfied the inclusion criteria were present during the study. This is a quantitative descriptive cross-sectional study design using the GCS knowledge questionnaire, convenience sampling method was used. Results showed that 6% of nurses had poor knowledge followed by 28% and 14% with good knowledge and average, 52% of nurses had excellent knowledge respectively. The result on the association between knowledge and professional qualification showed a significant association between the two variables (X^2=10.065, df=3, n=100 and p<0.005) level. There was also a significant correlation between knowledge and age (X^2=11.086, df=2, and p<0.005) level. The study found that only 19.04% nurses have excellent knowledge GCS. Professional qualification and age have a correlation with satisfaction level towards nurse's knowledge in GCS. Overall, the study supports that excellent and good knowledge to skills are important in assessing GCS levels.

Key words: Glasgow Coma Scale, Emergency department, In-patient department, Staff Nurse

I. INTRODUCTION:

Consciousness has two components arousal and content. Impairment of arousal can vary from mild (Drowsiness or somnolence) to Coma. Coma is the severest impairment of arousal and is defined as the inability to obey commands, Speak or open eyes with pain. Traumatic brain injury (TBI) is a leading cause of death and disability worldwide [(1)]. Yearly about 1.5 million people die from TBI and those several millions that survive receive emergency treatment [(2)]. In Malaysia, the statistics for the year 2009 to 2010 reveal that the causes of death from motor vehicles accident our head injury (56.5%) followed by brain injury (38.1%), both head and the brain injury (34%) and skull or craniofacial fractures (27.9%) [(3)]. So, it is important to note that the scale is intended to assist the level of consciousness and is not designed for following neurological deficits. This tool is used worldwide for neurological assessment and level of consciousness in nursing practices and is further enhanced with the support of best practice guidelines. It is therefore the most sensitive and reliable indicator of all neurological patients. Nurses who work in areas that care for these patients need to be competent and assessing GCS.

II. BACKGROUND OF THE STUDY

The Glasgow coma scale is widely used tool to measure objectively the patient's level of consciousness in the clinical setting. However, the GCS has a few limitations. It cannot detect subtle clinical changes in comatose patients due to the lack of important clinical indicators such as brainstem reflexes and respiration pattern which reflect the consciousness level.

III. OBJECTIVES

1. To assess the previous knowledge level regarding Glasgow coma scale among staff nurses working in the emergency and inpatient departments.
2. To find the association between the pretest knowledge level and selected demographic variables off the GCS among staff nurses working in the department and in-patient departments.

IV. MATERIAL AND METHODS:

Level of knowledge: Knowledge of GCS is defined in this study as the ability of nurses to elicit correct responses to 20 questions on GCS knowledge as contained in the instrument. For assessment of knowledge: Excellent 90-100%, Good 75 - 89%, Average 51-74%, Poor <50%.

V: RESULTS:

Among the hundred staff nurses, the majority of 50% were in the 21 to 25 years of age group, Marital status: 62% were married, educational qualification: 62% were in secondary education, professional qualification 83% were in GNM. Place of posting: 20% in all areas (Neurosurgery, Surgery ward, Emergency, Medicine and Orthopedic ward) and year of experience status were less than 5 years of experience, sample was 74%.

Table 1: Socio- demographic characteristics of respondents (n=100).

DEMOGRAPHIC CHARACTERISTICS	FREQUENCY	PERCENTAGE
AGE		
21-25Yrs	50	50%
26-30 yrs.	36	36%
31-35 yrs.	8	8%
36-40 yrs.	4	4%
>40 yrs.	2	2%
SEX		
Male	6	6%
Female	94	94%

MARITAL STATUS		
Married	62	62%
unmarried	34	34%
widow	4	4%
EDUCATIONAL QUALIFICATION		
Higher Secondary	83	83%
Graduate	32	32%
Post-Gradate	4	4%
PROFFSIONAL QUALIFICATION		
Higher Secondary	62	62%
Graduate	32	32%
Post-Gradate	4	4%
PROFFSIONAL QUALIFICATION		
GNM	83	83%
Graduation	10	10%
Post basic	5	5%
M.Sc. Nursing	2	2%
PLACE OF POSTING		
Medicine ward	20	20%
Surgery ward	20	20%
Neuro-surgery ward	20	20%
Orthopedics ward	20	20%
Emergency	20	20%
YEARS OF EXPERIENCE		
<5 yrs	74	74%
6-10yrs	20	20%
11-15 yrs	4	4%
>15yrs	2	2%

Table no-2: Knowledge Score of the Nursing Staffs with types of Wards
n=100

	PRE-TEST KNOWLEDGE SCORE							
TYPES OF WARDS	**EXCE-LLENT (90-100) %**	**%**	**GOOD (75-89) %**	**%**	**AVER-AGE (51-74) %**	**%**	**POOR (<50) %**	**%**
NEURO-SURGERY	2	10%	2	10%	6	30%	10	50%
SURGERY	0	0%	2	10%	3	15%	15	75%
EMERGENCY	3	15%	6	30%	3	15%	8	40%
MEDICINE	0	0%	7	35%	5	25%	8	40%
ORTHOPEDICS	1	5%	5	25%	4	20%	10	50%

Table No-2: Mean, S.D, Mean Percentage of the knowledge score of the stuff nurses

	Pre-Test			
Types of wards	**No. of sample**	**Mean**	**S. D**	**Mean%**
Neuro-surgery	20	46.65	25.873	46.65%
surgery	20	36.325	20.188	36.325%
medicine	20	54.325	25.075	54.325%
emergency	20	58.225	28.58	58.225%
orthopedics	20	50.25	26.475	50.25%

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Fig. No: Ranking the Knowledge Level of the Nursing Staffs on the Types of Ward

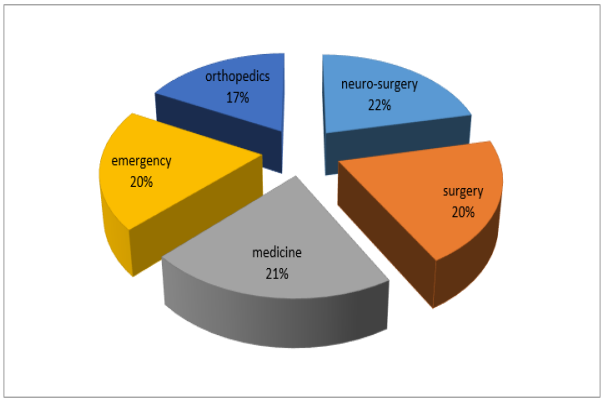

Table No 3: Association between levels of pretest knowledge on GCS with selected variables of age factor.

(n=100)

Professional Qualification	Levels of knowledge					Chi square		
	Excellent (%)	Good (%)	Average (%)	Poor (%)	Total	X^2	df	P-value
GNM	2(6.25%)	8(20.5%)	12(37.5%)	10(3.25%)	32(100%)	14.065	3	P<0.05
Bsc Nursing	1(4%)	6(24%)	10(40%)	8(32%)	25(100%)			
Post Basic Bsc nursing	6(18.1%)	15(45.4%)	10((30.3%)	2(6%)	33(100%)			
Msc Nursing	3(30%)	2(20%)	1(10%)	4((40%)	10(100%)			
Total	12(12%)	31(31%)	33(33%)	24(24%)	100(100%)			

The result on the association between knowledge and professional qualification levels shows that there was a statistically significant (significant level value is less than 0.05) association between the two variables (X^2=14.065, df=3, p value<0.05) shown in Table 3. Therefore, this this concludes that the two variables are associated. Post basic nursing have excellent knowledge 6 (18.1%) compared to Basic B.Sc. Nursing1 (4%). This shows that more practices and deep critical thinking are important in assessing GCS.

Table No: 4. Association between levels of pretest knowledge on GCS with selected variables of age factor.

(n=100)

Age	Levels of knowledge					chi square test		
	Excellence (%)	Good (%)	Average (%)	Poor (%)	Total	X^2	df	P-value
21-5Yrs	2(6.25%)	2(6.25%)	3(9.37%)	25(78.12%)	32(100%)	11.086	2	0.022
26-30 yrs	3(12%)	4(16%)	2(8%)	12(48%)	25(100%)			
31-35 yrs	3(13.6%)	5(22.7%)	2(9.09%)	12(54.5%)	22(100%)			
36-40 yrs	4(19.04%)	3(14.28%)	6(28.57%)	8(38.09%)	21(100%)			
Total	12(12%)	14(14%)	13(13%)	57(57%)	100 (100%)			

The result on the association between knowledge and age factor shows that there was a statistically significant (significance level is less than 0.05%) association between the two variables (X^2=11.086, df=2, p value=0.022) shown in table 4. Therefore, this concludes that the two variables are associated.

Nurses in age 36-40 years had excellent knowledge (19.04%) compared to the average of 21-25 years (6.25%). This shows that more experience and skill practices are important when assessing GCS**.**

VI: DISCUSSION:

Major findings of the study: -

- Out of 20 samples of neuro-surgery ward 70 % staff nurses are excellent,15 % have good knowledge, 10 % have average knowledge, and 5% have poor knowledge
- Out of 20 samples of orthopedic ward 40% staff nurses are excellent, 30% staff nurses have good knowledge,20% have average, and 10% have poor knowledge regarding GCS.
- Out of 20 samples of surgery ward 40% staff nurses are excellent,35% staff nurses have good, 20 % have average, and 55% have poor knowledge.
- Out of 20 samples of medicine ward 55%are excellent,25 % staff nurses have good knowledge, 15 % have average knowledge, and 5% have poor knowledge
- Out of 20 samples of medic ine ward 55% are excellent, 25% have good knowledge, 15% have average knowledge and none have poor knowledge.
- Out of 20 samples of emergency ward 45% excellent, 30% have good knowledge, 15% have average knowledge and none have poor knowledge.
- Our survey showed 86.3% have knowledge in Neuro-surgery ward, 80.45% are surgery, 83.375% are medicine ward, 79.225% are in Emergency ward and 69.41% are in orthopedics ward.
- The result on the association between knowledge and professional qualification level shows that there was a statistically significant (significant level value is less than 0.05) association between the two variables ($X2=14.065$, $df=3$, p value<0.05) shown in Table 3. Therefore, this this concludes that the two variables are associated. Post basic nursing have excellent knowledge 6 (18.1%) compared to Basic B.Sc. Nursing1 (4%). This shows that more practices and deep critical thinking are important in assessing GCS.
- The result on the association between knowledge and age factor shows that there was a statistically significant (significance level is less than 0.05%) association between the two variables ($X2=11.086$, $df=2$, p value$=0.022$) shown in table 4. Therefore, this concludes that the two variables are associated. Nurses in age 36-40 years had excellent knowledge (19.04%) compared to the average of 21-25 years (6.25%). This shows that more experience and skill practices are important when assessing GCS.

VII. CONCLUSION

The study found that only nurses of 19.04% have excellent knowledge in GCS. Professional qualification and age have a correlation with satisfaction level towards nurses' knowledge in GCS. After the detailed analysis the study leads to the following conclusion that shows that more experience and skill practices are important while assessing GCS.

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