
Knowledge and Practice Regarding Glasgow Coma Scale among Nurses



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Abstract: Background: Glasgow Coma Scale (GCS) is a reliable and objective neurological assessment tool used for assessing and recording the level of a person's conscious state. An assessment of conscious levels is considered a primary action of doctors and nurses who care for patients with neurological or neurosurgical problems. This study assessed the knowledge and practice regarding Glasgow coma scale among nurses in Nellore. **Objective:** To assess the level of knowledge and practice regarding Glasgow coma scale among nurses working in Narayana medical college hospital, Nellore. **Methods:** The staff nurses in this cross-sectional study working in Narayana medical college and hospital, Nellore. A total of 100 staff nurses were randomly selected. Trained investigators administered a standard questionnaire to each participant during a face to face interview and carried out data collection procedure. **Results:** The results shown that, out of 100 staff nurses with regard to the level of the knowledge on computers 10 (10%) of nurses having 'C' grade knowledge, 88 (88%) of nurses having 'B' grade knowledge, and 2 (2%) of nurses having 'A' grade knowledge. **Conclusion:** This study found that 10(10)% of staff nurses having C grade knowledge, 88(88)% of staff nurses having B grade knowledge, and 2(2)% of staff nurses having A grade knowledge. Regarding practice, 12 (12%) had Adequate Practice, 78 (78%) had moderately Adequate practice and 10 (10%) had Inadequate practice. These findings show a positive correlation between knowledge and practice. This finding raises concerns on the importance of knowledge and skill in assessing GCS. Continuing education and practice on use of the GCS tool are important. **Keywords:** Knowledge, Practice, Glasgow coma, Staff Nurses.

Introduction: Nurses form the first line of primary care for patients. They are responsible to assess patients systemically and as a whole. One of the major challenges that nurses face during assessment is the neurological dysfunctions, especially for patients with coma. The most important assessment in the neurological examination is to assess the level of consciousness (LOC), which is considered as the first step in neurological examination. Detecting the changes in level of consciousness depends on the

accuracy of nursing assessment. Therefore, the nurses should be knowledgeable, confident, and quick in performing this task. Based on this assessment a change in the interventions and clinical decisions for patient's condition and treatment might be.

Rapid and correct assessment will minimize the neurological complications, unnecessary and incorrect diagnostic procedures, mortality and morbidity. The basic requirement for any assessment to be effective is the availability of an objective, valid,



reliable and accurate tool. The first neurological tool used to assess patients' level of consciousness was the Glasgow Coma Scale (GCS) is considered as the most common less subjective gold standard coma assessment tool.

Glasgow coma scale (GCS), developed by Taesdale and Jennet in 1974 at The University of Glasgow, Scotland, UK, is employed worldwide to identify neurologic dysfunction and followup progress of level of consciousness, predict prognosis, and standardize communication among health professionals. This scale became an important tool to assist patient who suffered trauma, mainly BTI victims, and, posteriorly, its use extended to other neurologic conditions that can alter consciousness. Total score ranges from 3 to 15 and it is obtained by observation of spontaneous activities and use of verbal and/or painful stimulus.

This tool is used worldwide for neurological assessment of level of consciousness in nursing practice and is further enhanced with the support of best practice guidelines. It is therefore the most sensitive and reliable indicator of all neurological patient's. Nurses who work in areas that care for these patients need to be competent in assessing GCS. The scoring will detect early deterioration in such patients. Jaddoua et al. Showed that initial assessment of GCS obliterated unnecessary diagnostic tests and treatments.

An international study that evaluated knowledge of nurses about GCS and associated results with demographic variables, reported area of working and time of experience are associated with high or low knowledge. Nurses of neonatal intensive care unit had the highest score (12.7) whereas nurses of internal medicine had lowest score (9.7). In knowledge scale, nurses working at neurologic unit over or equal to 6 years had the highest scores (11.9), and those working for less or equal to 1 year had the lowest scores (10.0). The same study reported the need of educational

interventions and design of manuals for maintenance and improvement of assessment of consciousness using the GCS.

Given the importance of GCS as a tool for neurological assessment of patients, and the need of careful and standardized application, to evaluate health professionals' knowledge on this scale is fundamental to guarantee uniformity, reliability and accuracy in the use of GCS.

The aim of the current study is to assess the Knowledge and practice regarding Glasgow coma scale among nurses working in Narayana medical college hospital, Nellore.

Detailed Research Plan:

This cross sectional study was carried out in Narayana Medical College and Hospital of Nellore district. The target population of this study consisted of all staff nurses who meet the inclusion criteria like who are between 20-60 years, who are available during the data collection time.

The target population of this study consisted of 100 staff nurses. Sample size was calculated to estimate the prevalence of different health outcomes investigated in the survey, considering a confidence level of 95%, sampling error of 3 percentage points, percentage of losses estimated at 10%. Based on these parameters, we obtained a sample size of 100 staff nurses. For association tests, considering an estimated prevalence of the outcome of 50%, 80% power and 95% confidence level, this sample size would allow detecting as statistically significant a knowledge ratio of up to 1.4 as a risk factor and up to 0.6 as protective factor for both genders.

TOOLS FOR DATA COLLECTION:

SECTION-A: It deals with demographic data including age, Educational status, Religion, Source of knowledge, Gender, Marital status, Source of information, Attended computers course, No. of times attended and Designation.



SECTION-B: The tool consist of 2 parts as follows,

Part-1: Deals with selected socio demographic variables.

Part-2: In consist of 2 sections.

Section-I: Structured questionnaire to assess the level of knowledge.

Section-II: Observational check list to assess the level of practice.

Data Collection Procedure: This cross-sectional study was conducted in Narayana Medical College and Hospital of Nellore district during 2016. This study comprises of both male and female staff between 20-60 years, staff on leave and is not willing to participate and to give informed consent were excluded from the study. Structured questionnaire were developed to assess the knowledge and Observational check list to assess the level of practice regarding Glasgow coma scale among the nurses in Narayana Medical College Hospital, Nellore.

Institutional ethics committee approved the study tool. Written informed consent was obtained from participants.

Data was analyzed using the Statistical Package of Social Sciences (SPSS) 20.0 version of window software. Descriptive and inferential statistics used like Frequency and percentage distribution Mean, Median, Mode and Standard Deviation and chi square was used to test the assumption.

RESULTS AND DISCUSSION:

A total of 100 staff nurses were participated in the study. The table 1 shows the socio demographic profile of the staff nurses.

Table No – 1: Frequency and percentage distribution of socio Demographic Data. (N=100)

Sl.	Demographic Variables	Fre	Per
1. Age in Years			
a.	21-25	18	18%
b.	26-30	73	73%
c.	31-35	9	9%

2. Sex			
a.	Male	27	27%
b.	Female	73	73%
3. Educational qualification			
a.	GNM	43	43%
b.	B.SC(N)	50	50%
c.	P.BSC(N)	7	7%
4. Work Experience			
a.	<1 year	7	7%
b.	23yrs	77	77%
c.	4-5yrs	16	16%
5. Family Income			
a.	Below Rs. 4000	13	13%
b.	Rs. 4001 - 8000	75	75%
c.	Rs. 8001 - 12000	10	10%
d.	Above Rs. 12000	2	2%
6. Designation			
a.	Junior Staff	62	62%
b.	Staff nurse	36	36%
c.	Incharge	2	2%

Table – 2: Level of Knowledge Regarding Computers among Staff Nurses (N=100)

C		B		A	
No	%	No	%	No	%
10	10%	88	88%	2	2%

The above table shows that 10(10)% of staff nurses having C grade knowledge, 88(88)% of staff nurses having B grade knowledge, and 2(2)% of staff nurses having A grade knowledge.

FIG:1 Percentage distribution of practice regarding Glasgow coma scale among the staff nurses

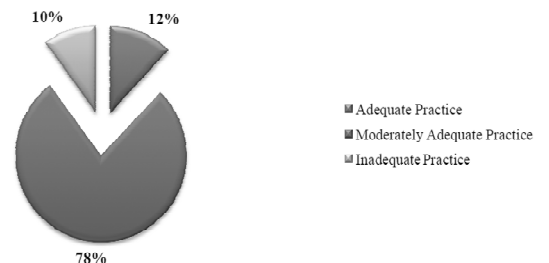


FIG - 1: Frequency and percentage distribution of practice regarding Glasgow coma scale among the staff nurses in NMCH, Nellore.



The above table shows that, practice regarding the Glasgow coma scale among the staff nurses in Narayana Medical College Hospital are 12 (12%) had Adequate Practice, 78 (78%) had moderately Adequate practice and 10 (10%) had Inadequate practice among 100 samples.

Table-3: Correlation between the Level of Knowledge and Practice Regarding Glasgow Coma Scale among Nurses

	Mean	Median	Mode	SD	Correlation
Knowledge	16.72	16	16	2.83	+ 0.46
Practice	10.12	11	10	2.83	

The above table shows that correlation Co efficient between level of knowledge and practice of Glasgow coma scale among staff nurse in NMCH, Nellore. Shows + 0.46 which indicates a positive correlation. So, the Skill comes in handy with experience as shown in this study by staff nurses in NMCH. The present study results are consistent with the findings of the previous studies conducted in Nellore region.

DISCUSSION:

Glasgow Coma Scale (GCS) is a reproducible tool used by nurses in almost every healthcare facility to assess level of consciousness in a patient with a neurological problem. It is important to have the skill and knowledge when assessing and applying critical thinking to interpret the findings.

Our survey showed that regarding knowledge 10 (10) % of staff nurses having C grade knowledge, 88 (88) % of staff nurses having B grade knowledge, and 2 (2) % of staff nurses having A grade knowledge. And regarding practice 12 (12) % had Adequate Practice, 78 (78%) had moderately Adequate practice and 10 (10) % had Inadequate practice among 100 samples.

This is comparable to the finding by Teles et

al. 10 who found that 74.55% of the staff nurses had average knowledge and 25.45% had poor knowledge in GCS, whereas Jaddoua et al. 1 showed that all nurses had inadequate knowledge in GCS. Skill comes in handy with experience as shown in this study.

The limitation of the study was that only nurses participated in this study. Further study should be conducted on all healthcare personnel practicing at the Emergency and Outpatient Departments.

The present study results are consistent with the findings of the previous studies conducted in Nellore region.

Conclusion: This study found that 10(10) % of staff nurses having C grade knowledge, 88(88)% of staff nurses having B grade knowledge, and 2(2) % of staff nurses having A grade knowledge. Regarding practice, 12 (12%) had Adequate Practice, 78 (78) % had moderately Adequate practice and 10 (10%) had Inadequate practice. These findings show a positive correlation between knowledge and practice. This finding raises concerns on the importance of knowledge and skill in assessing GCS. Continuing education and practice on use of the GCS tool are important.

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Conflict of interests: Nothing to declare.

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