

# Staff Nurses Knowledge Regarding Glasgow Coma Scale in Selected Hospitals in Lucknow

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**Abstract:** This paper presents an overview on staff nurses knowledge regarding Glasgow coma scale in selected hospitals in Lucknow.

**Keywords:** Glasgow coma scale

## 1. Introduction

A traumatic brain injury (TBI) is defined as a blow to the head or a penetrating head injury that disrupts the normal function of the brain. TBI can result when the head suddenly and violently hits an object or when an object pierces the skull and enters brain tissue. Symptoms of a TBI can be mild, moderate or severe, depending on the extent of damage to the brain. Mild cases may result in a brief change in mental state or consciousness, while severe cases may result in extended periods of unconsciousness, coma or even death.

The Glasgow Coma Scale (GCS), designed in 1974, is a tool that has the ability to communicate the level of consciousness of patients with acute or traumatic brain injury. Developed by Graham Teasdale and Bryan J. Jennett, professors of neurosurgery at the University of Glasgow's Institute of Neurological Sciences, this scale is the gold standard used for all acute medical and trauma patients. Used by trained medical professionals, the GCS is an objective and reliable tool that nurses and nursing students should become familiar with regardless of their place of employment. Most commonly used in the ICU and ER setting, nurses may need to perform a GCS on a patient at any given time. The Glasgow Coma Scale, which can identify changes to consciousness in traumatic brain injury patients, is a tool that requires nurses to fully understand its purpose and how to use it. Identifying the patients that require scoring is the first step in properly using the scale. 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 showed that initial assessment of GCS obviated unnecessary diagnostic tests and treatments

## 2. Methodology

### A. Study Design

Quantitative cross-sectional design was used for assessing the knowledge of the nurses. Convenient sampling was used. The sample size was 100 staff nurses from selected hospitals in Lucknow.

### B. Setting

The study was conducted at carrier medical college and GCRGC medical college Lucknow.

### C. Instrument

Questionnaires were used to collect data. It is divided into Two parts. In Part A there are 4 questions related to demographic data addressing age, level of education, gender, and years of service. Part B consists of 25 multiple choice questions related to knowledge on Glasgow Coma Scale (GCS).

### D. Data collection and analysis

Data was collected from May to June 2015. One hundred questionnaires were distributed, to nurses that met the inclusion criteria. Each nurse was given 15–20 minutes to answer the questionnaire, which was then returned. Data was analyzed using the Statistical Package of Social Sciences (SPSS) 20.0 version of window software. Descriptive and chi square was used to test the assumption.

## 3. Results

56% of the nurses who participated knew what Glasgow Coma Scale was initially devised to. To the question pertaining to the part of the brain involved in assessing eye opening, 55.6% answer correctly as opposed to 31.1% for verbal response and 44.4% for motor response.

The majority (76.2%) answered correctly to the question, pertaining to the components of the Glasgow Coma Scale. Only 66.8% of the participants knew that vital signs are not a component of the Glasgow Coma Scale. Only about one-fifth (31.5%) of the nurses knew how to test the best motor response, but more than half (56.5%) knew how to test for motor response in a tetraplegic patient. While the vast majority (88.1%) knew what is the lowest score of the Glasgow Coma Scale, however only about half (66.9%) knew the score which defined comatose.

Only 21.9% responded correctly to the question on reduction of score to define deterioration. 66.7% said Glasgow Coma Scale can be assessed on an intubated patient's and 88.7% could answer the question pertaining to patients' verbal response. On assessing a patient's motor response with pain stimulus only 12.9% answered correctly but when assessing RTA (road traffic accident) patient, who has swollen eyes 73.4%, answered

correctly.

This showed that the nurse's knowledge on GCS is poor in detecting deterioration of patient and in assessing the best motor response using pain stimulus. Overall only 10.01% had good knowledge, scoring is 80–100% (12–15 points), 30.09% had satisfactory knowledge, and the knowledge of 60% of the nurses who participated in the questionnaire was poor; that is, more than half had poor knowledge in assessing GCS. Association between knowledge and education level shows that there was statistically significant (significant level is value less than 0.05) association between the two variables. The result on association between knowledge and age group shows that there was a statistically significant (significance level is less than 0.05) association between the two .

#### 4. Discussion and conclusion

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 Overall only 10.01% had good knowledge, scoring is 80–100% (12–15 points), 30.09% had satisfactory knowledge, and the knowledge of 60% of the nurses who participated in the questionnaire was poor.

Educational level is not the primary factor needed in assessing the GCS as shown in this study. The result on

association between knowledge and education level shows that there was a statistically significant association between the two variables. Similar to the study by Heron et al. on interrater reliability of the GCS found there were statistically significant differences with education qualification.

Skill comes in handy with experience as shown in this study. The result on association between knowledge and age group shows that there was statistically significant association between the two variables. This study found that only 10.1% of nurses have good knowledge in GCS. 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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