

# Effectiveness of Structured Teaching Programme on Knowledge regarding Glasgow Coma Scale among Nurses Working in Selected Hospital of Udaipur City

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**Abstract:** *Head injury is the leading cause of mortality rate in India, and the overall survival rate for out of hospital head injury rarely exceeds 10%. Bystander Glasgow coma scale has been shown to assess the level of consciousness for head injury victims. More than 60% of all deaths from head injury. Most head injury victims are men who are on drive a vehicle they collapse in their road traffic accidents 85% and 15% on own home falling. Every day, men, women and children suffer head injuries. A trip or fall, a car accident, a sports injury – these everyday injuries can range in severity from concussion to coma. Traumatic Brain Injury (TBI) can be fatal or, in survivors, can produce persistent problems that significantly affect the livelihood and well - being of millions around the globe. India has the rather unenviable distinction of having the highest rate of head injury in the world. In India, more than 100, 000 lives are lost every year with over 1 million suffering from serious head injuries. In India, 1 out of 6 trauma victims die, while in the United States this figure is 1 out of 200. Therefore, the research study reveals the effectiveness of structured teaching programme on knowledge regarding Glasgow coma scale among nurses*

**Keywords:** Quality of nursing care, patients' satisfaction

## 1. Background of study

**“We hit a stride where all self - consciousness disappeared”.**

Head injury is the leading cause of mortality rate in India, and the overall survival rate for out of hospital head injury rarely exceeds 10%. Bystander Glasgow coma scale has been shown to assess the level of consciousness for head injury victims. More than 60% of all deaths from head injury. Most head injury victims are men who are on drive a vehicle they collapse in their road traffic accidents 85% and 15% on own home falling. Every day, men, women and children suffer head injuries. A trip or fall, a car accident, a sports injury – these everyday injuries can range in severity from concussion to coma. Traumatic Brain Injury (TBI) can be fatal or, in survivors, can produce persistent problems that significantly affect the livelihood and well - being of millions around the globe. India has the rather unenviable distinction of having the highest rate of head injury in the world. In India, more than 100, 000 lives are lost every year with over 1 million suffering from serious head injuries. In India, 1 out of 6 trauma victims die, while in the United States this figure is 1 out of 200. This seemingly unbreachable gap speaks volumes of the perfected PTC procedures in US and their near absence in India. Half of those who die from TBI do so within the first two hours of injury. It is now known that only a portion of neurological damage occurs at the moment of impact (primary injury); damage progresses during the ensuing minutes, hours and days. The secondary brain injury can result in increased mortality and disability. Consequently, the early and appropriate management of TBI is critical to the survival of these patients. This while being a critical factor in the overall prospects of a patient is yet to be fully appreciated. In 1991, 60, 000 people were killed in road traffic accidents

(RTA's), as compared to 24, 600 in 1980. This figure is now closing in on 100, 000 deaths per year. Ninety - five percent of trauma victims in India do not receive optimal care during the “golden hour” period after an injury is sustained, in which health care administration is critical. The outcome of TBI is drastically correlated to the response of pre - hospital care and rehabilitation. Thirty percent of those who currently die from head injuries could be saved if quality care were available to them sooner.

Most road traffic accident victims are in the 20 - to 40 - year age group, the main bread - earners of the family, putting the whole family below the poverty line in many cases while depriving society of vital drivers of economy as in many cases these are entrepreneurs or professionals. Pedestrians and motorcyclists are the most common victims of road traffic accidents in India<sup>13</sup>.

Glasgow coma scale knowledge should be based on in - hospital including recognition of sick patients, and should be taught using simulation of variety of head injury scenarios. This was ensuring that the knowledge reflects the potential situations that nurse may face in practice. Poor knowledge retention following Glasgow coma scale knowledge for nursing and medical staff has been documented. Glasgow coma scale is mandatory for nursing staff is important as nurse often discover the victim's of unconsciousness in - hospital. Structured teaching programme has been shown to improve competence in Glasgow coma scale. An in-hospital scenario based structured teaching programme should be devised and tested to assess the efficiency of this medium in Glasgow coma scale knowledge for nurses.

The assessment of comatose patients is an important part of critical care. The Glasgow coma scale (GCS), originally designed for patients with head trauma, has become the most

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widely used scoring system for patients with an altered level of consciousness in the ICU. Important functions of the GCS inconsistent inter observer reliability, concerns over the predictive value in brain injury patients undergoing modern neuro intensive care, the impossibility of assessing the verbal score in intubated patients, and the exclusion of brain stem reflexes. Over the past decades, a variety of alternative scoring systems have been developed, although none of them reached wide spread acceptance. It is very important that every nurse working in areas needing critical care such as High Dependency Units has enough knowledge to assess and intervene appropriately and she/he should also be able to communicate any change in patient's condition for multidisciplinary intervention.

## 2. Need for the study

The accuracy of the assessment data and the nurses critical thinking skill to identify the change, interpret its significance and take appropriate action from the foundation of neuroscience nursing practice. The neurological assessment is a key component in the care of the neurological patient. It can help the Nursing staff to detect the presence of neurological disease or injury and monitor its progression, determine the type of care and gauge the patients' response to intervention.

### Objectives of the study

- 1) To assess the pre test knowledge scores regarding Glasgow coma scale among nurses.
- 2) To develop and administer the structured teaching programme regarding Glasgow coma scale among the nurses.
- 3) To evaluate the effectiveness of structured teaching programme on knowledge regarding Glasgow coma scale among the nurses.
- 4) To find out the association between mean pre test knowledge scores regarding Glasgow coma scale and selected socio demographic variables.

## 3. Research Methodology

In this chapter the methodology for the study is discussed. It includes research approach, research design, variables, population of the study, sample and sampling technique, inclusion and exclusion criteria, setting of the study, research tools, development of the tools, intervention, pilot study, content validity and reliability, ethical issue and plan for data collection, plan for data analysis and interpretation. Research methodology is concerned with problem solving, problem statement, historical research and evaluation of research. It includes the collection, assembling and examination of available data, making assumptions about the data, testing the assumptions, and developing practical applications from the laws or principles that have been derived from the verifications of the assumption.

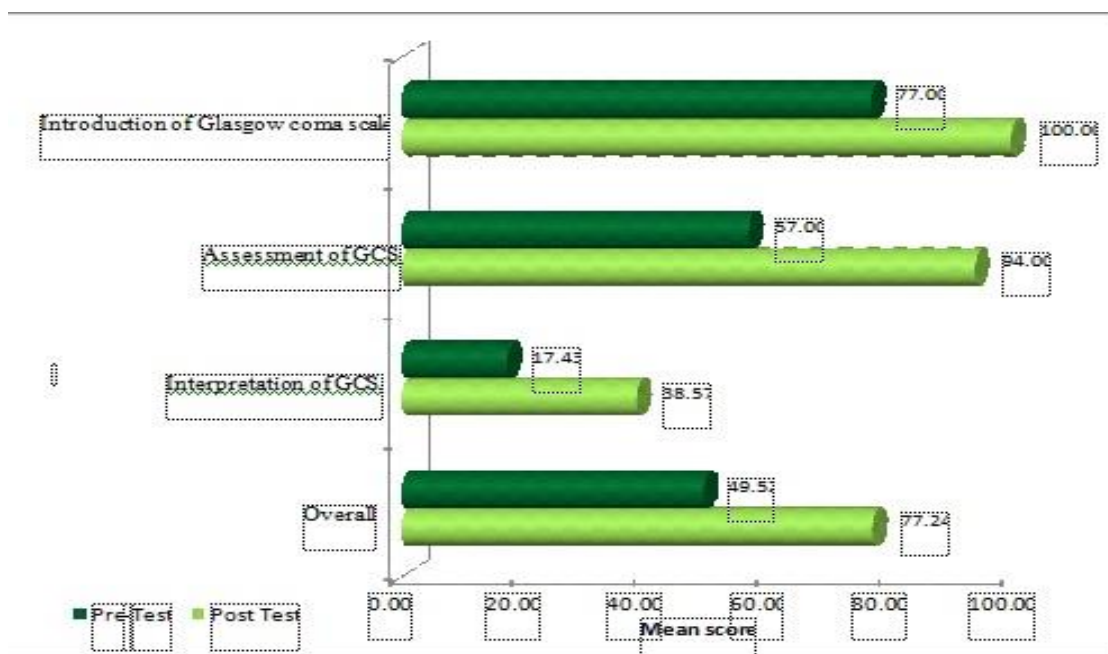
## 4. Conceptual Framework

The conceptual framework applied this study is developed by Ludwig Von Bertalanffy's general system theory. According to this general system theory, a system consist of a set of interacting component, all contributing to the overall goal of the system, any system consist of input, through put process and output.

### Analysis

#### Area Wise Comparison of Mean Pre Test and Post Test Knowledge Scores Regarding Glasgow coma scale, n= 50

Areas	Pre Test		Post Test	
	Mean	SD	Mean	SD
Introduction of GCS	77.00	10.04	100.00	0.00
Assessment of GCS	57.00	20.85	94.00	6.31
Interpretation of GCS	17.43	18.99	38.57	27.72
Overall	49.52	14.01	77.24	8.67

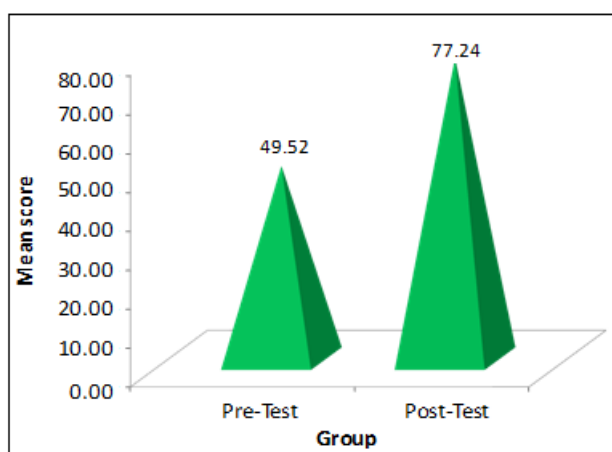


highest mean pre test knowledge scores has 77.00 whereas highest mean post test scores 100.00% was found in the area of introduction of GCS, mean pre test knowledge scores 57.00% as well as mean post - test knowledge scores 94.00% was found in the area of assessment of GCS, mean pre test knowledge scores 17.43% and mean post test knowledge scores 38.57% was found in the area of interpretation of GCS.

#### Effectiveness of Structured Teaching Program on knowledge regarding Glasgow coma scale.

Test	N	Mean	SD	t	Df	Result
Pre Test	50	49.52	14.01	17.30	49	***
Post Test	50	77.24	8.67			

\*Level of significant at 0.05



Illustrated that the mean post test knowledge scores 77.24 was greater than the mean pre test scores 49.52. The mean difference between pre test and post test scores was 27.72. The 't' value 17.30 was significant at 0.05 level. Hence research hypothesis  $H_1$  was accepted. This indicates that the structured teaching program was found effective in increasing the knowledge regarding Glasgow coma scale among nurses.

Overall statistical analysis revealed that there were significant association between mean pre test knowledge scores and selected socio - demographic variables such as age, Gender, professional qualification, working experience, attended workshop on Glasgow coma scale, Hence hypothesis  $H_2$  stated that there will be significant association between pre test knowledge scores regarding Glasgow coma scale and selected socio - demographic variables stated that there will be a significant association between mean pre test knowledge scores and selected socio demographic variables was accepted.

## 5. Discussion

Statistical findings revealed that association between mean of pre test knowledge scores and respondents who have attended workshop revealed that highest mean % score 72.80 was found among respondent who have attended workshop and 45.70% knowledge scores in respondent who had not attended workshop, calculated t value 2.66, df was less than the P value with df 48, which indicated that significant

association was found between pre test knowledge scores and those who have attended workshop.

Overall statistical analysis revealed that there was a significant association between mean pre test knowledge scores and selected socio - demographic variables such as age, Gender, professional qualification, working experience, attended workshop on Glasgow coma scale, Hence  $H_2$  There will be significant association between pre test knowledge scores regarding Glasgow coma scale and selected socio - demographic variables stated that there will be a significant association between mean pre test knowledge scores and selected socio demographic variables was accepted.

## 6. Conclusion

The knowledge of nurses regarding Glasgow coma scale before the administration of the structured teaching programme was very low. The structured teaching programme significantly increased the knowledge of nurses regarding Glasgow coma scale.

## 7. Implications

The findings of the study have implications in nursing profession in the field of service, administration, education and research.

## 8. Recommendations

- In the light of the findings listed above and form, the personal experiences of the following recommendations are offered.
- More in - depth studies can be conducted on the topic.
- Both experimental and control group can be taken for further study.
- Similar study can be replicated on a larger sample their findings can be generalized for a larger population.

## References

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