

Effectiveness of Clinical Examination on Care of Unconscious Patient among Under Graduate Nursing Students in a Selected Educational Institute

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Abstract: *Assessment of Intensive Care Nurse Knowledge and Perception of Eye Care Practice for Unconscious and Mechanically Ventilated Patients in Intensive Care Units in Saudi Arabia. A descriptive cross sectional was used in this study. A total sample of 55 nurses from medical and surgical intensive care units was included in the study. Result shows that the total score of nurses' knowledge of eye care revealed that less than half (46.7%) of intensive care unit (ICU) nurses have adequate knowledge and 40% have inadequate knowledge. Statistical significant difference between medical and surgical ICU nurses in 2 subtotal item in knowledge ($p=0.045$). The total nurses perception of eye care practice was 95.6% high acceptance perception regarding eye care practice with 98.2 median and 5.6 IQR and no significant difference was noticed between medical and surgical ICU nurses in total and subtotal score of perception. Conclusion of this study was ICU nurses' level of knowledge concerning eye care of mechanically ventilated patients ranged between adequate and inadequate and did not reach satisfactory level*

Keywords: Effectiveness, Clinical Examination, Knowledge, Practice, Care of unconscious patients

1. Introduction

"Until you make the unconscious conscious, it will direct your life and you will call it fate."

C. G. Jung

Neurology (from Greek $\nu\epsilon\upsilon\rho\omicron\nu$, neuron, and the suffix -λογία- logia "study of") is a branch of medicine dealing with disorder of the nervous system. Neurology deals with the diagnosis and treatment of all categories of conditions and disease involving the central and peripheral nervous system (and their subdivisions, the autonomic and somatic nervous system), including their coverings, blood vessels, and all effect or tissue, such as muscle.

Unconsciousness is an abnormal state resulting from disturbance of sensory perception found in different disease condition in which patient is not aware of physical and physiological need and he/she not aware of what is happening around them. It may be momentary or prolonged to days or months. Clinically the patient who does not respond to the spoken word is unconscious.

Traumatic brain injuries are a leading cause of morbidity, mortality, disability and socio economic losses in India and other developing countries. It is estimated that nearly 1.5 to 2 million persons are injured and 1 million succumb to death every year in India

A Clinical Examination is a modern type of examination often used in health sciences. It is a form of performance-based testing used to measure clinical competence of client. In which professionals and students are trained and test their skills. Clinical skills training is a basic and comprehensive part of health care education.

Clinical examination the physical examination can reveal more about the reasons for a patient's LOC. Overall, the examination is targeted toward finding signs of cardiac

disease and any evidence of neurologic illness. Useful physical findings in patients presenting with loss of consciousness. Heart rate –tachycardia or bradycardia, respiration rate slow or fast, blood pressure changes, abdominal tenderness, absence pulse and neurologic findings seizures and strokes Neck vein distention, skin pallor, and heart murmur.

The Glasgow Coma Scale (GCS) was introduced in 1974 as a method for determining objectively this verity of brain dysfunction and coma six hours after the occurrence of head trauma (HT) (Teasdale, Jennett, 1974). Nowadays, it is by far the most widely used score to assess the severity of HT in clinical research and to compare series of patients (Alvarez et al., 1998). The main advantage of this scale is that it can be utilized by physicians, nurses, and other care providers due to its simplicity (Fischer, Mathieson, 2001). In the present review the history of GCS, the principles of scoring, the applications, the shortcomings and future trends concerning its application are discussed.

According to (Jennett and Teasdale, (1974) -The GCS was developed in 1974 by Teasdale and Jennett as a 14-point scale and revised three years later to its current 15-point scale as a tool to assess 'the depth and duration of impaired consciousness and coma'. Since the 1970's it has received acclaim from clinicians and although originally developed for use following head trauma, it has been extensively used in a variety of clinical settings for the evaluation of level of consciousness. The GCS is a popular, reliable (intraclass correlation coefficient, 0.8 to 1 for trained users (Prasad 1996)), physiological scoring system tool to assess changes in states and duration of consciousness in adults; it is therefore a critical measure of neurological function. Specifically, it is concerned with assessing arousability and awareness as components of consciousness; reflecting the person's conscious state. However, it is not designed to capture distinct details of the neurological examination or to determine the cause of reduced consciousness.

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According to (Holdgate, Ching and Angonese (2006).-The GCS has therefore become an important instrument for communicating an accurate assessment of a person's condition between different healthcare professionals (Holdgate, Ching and Angonese 2006). It also facilitates monitoring and thus maximizes the management of care in the acute phase e.g. in the acute stage of triage and the acutely unwell person along with allowing rapid detection of neurological complications. The GCS has a well-established profile for use with people who have sustained a traumatic brain injury, designating them into three severity categories; mild (GCS 13-15), moderate (9-12) and severe (3-8) categories (NICE 2014). These categories are a valuable indicator of injury severity; in the initial stages of assessment the depth of impairment of consciousness along with more long-term evaluations of duration of loss of consciousness can provide a useful measure of the brain injury. Although the GCS score as a single predictor of outcome is mixed in its ability to predict outcomes in trauma cases, the motor sub score contains most of the predictive power (Healey et al. 2003; 3 Lesko et al. 2013), with Healey et al. (2003) asserting that the addition of the verbal and eye components add little to the predictive power of the GCS.

Problem definition

"Effectiveness of clinical examination on care of unconscious patient among under graduate nursing students in a selected educational institute."

2. Methodology

Research approach: A quantitative approach was used for this study

Research design: A quasi experimental one group pre test post test design (no control group but randomization).

Variables under study: (1) Independent variable: "was clinical examination (GCS) on care of unconscious patient" (2) Dependent variable: "knowledge regarding clinical examination (GCS): The study was conducted in selected hospital

Population: In this study, the population included nursing students. **Target population** consists of **under graduate nursing students who fulfill the inclusive and exclusive criteria.**

Sample and sampling technique

Sample: In the present study sample Under graduate nursing students who meet the inclusive criteria was the subject for the present study.

Sample size: The sample size consists of 60 under graduate nursing students who fulfill the inclusion criteria.

Sampling technique: Simple random sampling technique

Inclusion criteria- Under graduate nursing students who are:

- Give consent for the study.
- Come under selected educational institute for the study.
- Willing to participate in the study.

- Able to speak, understand read and write, Marathi and English.

Exclusion criteria- Under graduate nursing students who are:

- On vacation or absent for classes.
- Those who are not participated in the study.

Sick at the time of data collection

- **Plan for data analysis:** - Description of demographic characteristics of the subjects was computed by using frequency and percentage.
- Mean, Standard deviation of pre and post- test knowledge scores was computed.
- "t" test was applied to determine the significance of mean difference between mean pre-test and post- test knowledge scores.
- Data related to effectiveness of clinical examination was analyzed in terms of frequency, proportion, mean and standard deviation of pre and post test knowledge scores.
- The significance was calculated by using Mean, Standard deviation and "p" value.
- Chi- square test was used to find the association of knowledge score with demographic variables and the findings were documented in tables, graphs and diagram.

Preparation of the tool Section I:- Demographic data, Section II questionnaire and observational checklist

3. Results

Organization of the data

The findings of the present study showed that, the post –test knowledge score was higher than the pre-test knowledge score range. The mean of post test score 19.20 with standard deviation of 4.8. also higher than the mean of pre-test knowledge score 13.65 with standard deviation of 4.18. The comparison of pre- test and post -test knowledge score showed that there was a significant gain in knowledge regarding care of unconscious patient at the test statistics value of the paired t test was 14.23 with p value 0.00.

Shows that clinical examination on care of unconscious patient to improve the **knowledge** was effective.

The comparisons of the pre test and post test means of the practice were done by the paired t test. The pre test average score was 10.65 with standard deviation of 4.71. The post test average score was 21.80 with standard deviation of 4.38. The test statistics value of the paired t test was 15.48 with p value 0.00.

Shows that clinical examination on care of unconscious patient to improve the **practice** was effective.

4. Discussion

Finding related to Analysis of demographic data of the under graduate nursing students in a selected educational institute in terms of frequency and

percentage. Majority age of under graduate nursing students 55% were in the age group 19-21 years of age, 33.33% were in the 22-24 years and 11.67% in the group 25 & above. Majority to gender of under graduate nursing students, in the study 85% were females 15% were male. Majority to religion of under graduate nursing students 80% were from the religion Hindu, 11.67% were from the other religions, 6.67% from the Christian 1.67% from the Muslim, Majority according to education of under graduate nursing students 66.67% were from the Basic BSc course and 33.33% were from the PBBSc course. Majority according to previous knowledge of under graduate nursing students 86.67% answered yes and 13.33% answered No. Majority according to source of previous knowledge of under graduate nursing students in the study, 44.23% from the journal, 26.92% from the internet and 44.23% from the other sources.

Finding related to Analysis of data related to assessment of the Knowledge and practice in terms of frequency and percentage.

In pre test knowledge scores, 3.33% of subjects were having good knowledge, 65% were having average knowledge and 31.67% in the poor knowledge category. In post test knowledge scores, 28.33% of subjects were having good knowledge, 58.33% were having average knowledge and 13.33% in the poor knowledge category.

In pre test practice scores, 6.67% of subjects were having good practice, 43.33% were having average practice and 50% in the poor practice category. In post test practice scores, 65% of subjects were having good practice, 30% were having average practice and 5% in the poor practice category.

Finding related to Analysis of data related to the effectiveness of clinical examination on care of unconscious patient regarding knowledge and skill among under graduate nursing students in a selected educational institute.

The comparisons of the pre test and post test means of the **knowledge** were done by the paired t test. The pre test average score was 13.65 with standard deviation of 4.18. The post test average score was 19.20 with standard deviation of 4.8. The test statistics value of the paired t test was 14.23 with p value 0.00. Shows that clinical examination on care of unconscious patient to improve the knowledge was effective.

Analysis of data related to the effect clinical examination on care of unconscious patient regarding skill among under graduate nursing students in a selected educational institute.

The comparisons of the pre test and post test means of the **practice** were done by the paired t test. The pre test average score was 10.65 with standard deviation of 4.71. The post test average score was 21.80 with standard deviation of 4.38. The test statistics value of the paired t test was 15.48 with p value 0.00. Shows that clinical examination on care of unconscious patient to improve the practice was effective.

Analysis of data related to the association between pre test knowledge level among under graduate nursing students with the demographic variables.

The analysis of association of selected demographic variables with knowledge scores using chi-square revealed that there was significant association between knowledge score and selected demographic variables such as educational status. But it is found that there was a no significant association between knowledge score and selected demographic variables such as age, gender, religion, previous knowledge and source of previous knowledge. Information at 5 % level of significance. Hence **H₂** accepted in case of variable such as educational status and **H₂** is rejected in case of such as age, gender, religion, previous knowledge and source of previous knowledge.

The finding of the current study are congruent with the finding of conducted study by,

According to Soheir Tawfeek Ahamed (2015)

Glasgow Coma Scale Technique: Effect of Theoretical and Practical Educational Program on Nurses' Compliance quasi experimental design was used. Setting of the study was conducted at the Neurological Intensive care Unit, stroke ICU and neurosurgical ICU at Ain Shams University Hospitals Cairo, Egypt. A purposive sample consisted of (37) nurses. Two tools used to collect data. (1) Structured self-administer questionnaire sheet. The Results revealed that statistical significant differences were found between pre/post and follow - up after educational program regarding level of nurse's competence knowledge and practice also, there was highly significant correlation between total competent levels (knowledge & practice) $r=0.626$ & $r=0.743$ $p<0.001$ respectively. As well, the study noticed an increase number of performed neurological assessments over time by the nurse & interpretation Score correctly after educational program implemented 83.78% & 64.86% respectively. Conclusion of this study was educational program was confirmed to improve the competence of nurses' performance (knowledge and practice) concerning GCS technique and there was also a positive correlation between levels of nurses' knowledge as regards their practice. The study Recommended that Educational program should be provided to all nurses caring for unconscious patient concerning GCS, establishing and distributing a manual procedure book to all nurses who were working in critical care units and neurological wards including standard of GCS technique.[58]

No Significant Association

No Significant Association:

For the all remaining demographic variables the p value of the association test with knowledge was more than 0.05. That means, the knowledge of under graduate nursing students is independent of these demographic variables. Concludes that, there was no significant association of these demographic variables with the knowledge.

No Significant Association

For the all remaining demographic variables the p value of the association test with practice was more than 0.05. That means, the practice of under graduate nursing students is independent of these demographic variables. Concludes that, there was no significant association of these demographic variables with the practice.

5. Conclusion

The findings of the present study showed that, the post –test knowledge score was higher than the pre-test knowledge score range. The mean of post test score 19.20 with standard deviation of 4.8. also higher than the mean of pre-test knowledge score 13.65 with standard deviation of 4.18.

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The comparisons of the pre test and post test means of the practice were done by the paired t test. The pre test average score was 10.65 with standard deviation of 4.71. The post test average score was 21.80 with standard deviation of 4.38. The test statistics value of the paired t test was 15.48 with p value 0.00.

Shows that clinical examination on care of unconscious patient to improve the **practice** was effective.

The study findings concluded that under graduate nursing students had poor knowledge regarding care of unconscious patient. The clinical examination (GCS) had great potential for accelerating the awareness regarding clinical examination on care of unconscious patient.

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