

A study to assess the effectiveness of structured teaching program on knowledge regarding care of patients with head injury among staff nurses in selected hospitals at Bangalore

¹Ms. Pushpalatha. A.N. , M.Sc. Nursing, Medical Surgical Nursing Department, Ramaiah institute of Nursing Education and Research, Bangalore, Karnataka, India.

²Mrs.Malathi.K., Lecturer, Medical Surgical Nursing Department, Ramaiah institute of Nursing Education and Research, Bangalore, Karnataka, India.

Corresponding Author: Ms. Pushpalatha. A.N. , M.Sc. Nursing, Medical Surgical Nursing Department, Ramaiah institute of Nursing Education and Research, Bangalore, Karnataka, India.

Citation this Article: Ms. Pushpalatha. A.N., Mrs. Malathi. K., “A study to assess the effectiveness of structured teaching program on knowledge regarding care of patients with head injury among staff nurses in selected hospitals at Bangalore”, IJMSIR- January - 2021, Vol – 6, Issue - 1, P. No. 287 – 292.

Type of Publication: Original Research Article

Conflicts of Interest: Nil

Abstract

A pre-experimental one group pre-test post-test research design was selected for the study and non probability convenient sampling technique was used to select 30 staff nurse working in the Neuro care units. A structured knowledge questionnaire was used to evaluate the knowledge level on care of patients with head injury before and after the structured Teaching Programme. The collected data were analyzed with chi-square and t test. The result showed the significant difference suggesting that the structured Teaching Programme was effective in increasing the knowledge of the staff nurses ($t = - 9.941$ at $P < 0.001$). Hence there is a significant difference in pre-test and post-test knowledge scores regarding care of patients with head injury in the neuro care unit. The study showed that there is no significant association found between level of knowledge and the selected socio-demographic variables. The study concluded that developed structured teaching Programme (STP) was effective in

improving the knowledge of nurses regarding care of patients with head injury.

Keywords: Staff Nurses Knowledge, Effectiveness, Head Injury, Structured Teaching Programme.

Introduction

The rapid urbanization, industrialization, motorization and changing lifestyles of individuals have given rise to a plethora of problems, among which injuries top the list. A number of social factors accompanying this change like increasing migration, large-scale housing and construction activities, lack of safety measures on road, at home, in work place, play sites, emerging problem of alcohol and drugs, increasing violence and crime rates, the general absence and disregard to safety practices at all places has contributed to an alarming increase of injuries in that head injury is most common nowadays. Meagre pre-hospital care with added delay in emergency care has only added further to rising mortality and disability rates. Head injury refers to any degree of injury to the head ranging from scalp

laceration to loss of consciousness to focal neurological deficits. The terms traumatic brain injury and head injury are often used interchangeably in the medical literature. Classification of head injury by Centers for Disease control and prevention (CDC) includes injury to the scalp, skull or brain. CDC Traumatic brain injuries are classified as – mild, moderate, or severe based on length of unconsciousness, inability to recall the event, confusion, difficulty learning or remember new information, difficulty speaking in coherent sentences, unsteadiness, lack of coordination, and vision or hearing problems. Head injury can result either from the direct effects of the trauma such as falls, road traffic accidents, assaults, alcohol, over drug intake and direct blow on brain tissue, or from secondary responses to trauma, such as cerebral edema, hematoma (blood clot), swelling, or increased intracranial pressure. Symptoms of traumatic brain injury which includes unconsciousness, headaches, dizziness, nausea or vomiting, changes in mood, vision problems, inability to retain new information and difficulty sleeping. The medical management of severely head-injured clients focuses on supporting all the systems, this involves continuous assessing level of consciousness, continuous intra cranial pressure monitoring , management of ventilatory support, fluid balance , elimination, nutrition, maintaining normothermia, maintaining cerebral perfusion pressure and gastrointestinal function. Surgical management done in case of subdural and epidural hematomas, depressed skull fractures, and penetrating foreign bodies. Surgical approach includes burrhole, craniotomy, craniectomy and cranioplasty. Nursing management of head injury in neuro care unit which includes respiratory management, intracranial pressure monitoring, cardiovascular management, skincare

management, gastrointestinal care management, glucose management, fluid management, bowel care management, nutritional management, drug management, and pre-operative and post-operative nursing management of patient with a head injury. Professionals should have adequate knowledge and awareness about any complications that might arise in the patients during the acute stage. The early detection would ease out a lot more complications and needs to look for some of the early complications and late complications, so should need to look for these complications and manage appropriately Various studies have highlighted that there is lack of comprehensive, integrated, preventive and rehabilitative program about care of patients with head injury in the Bangalore city and in the country as well. Role of the nurse is vital in the care and treatment of head injured patients. Nurses in this setting must have a set of skills and knowledge that exceed those required in other disciplines. By demonstrating excellence in practice, nurses can influence the outcome for these critically ill patients in terms of morbidity and mortality, by reducing secondary brain injury.

Hypotheses

H1 - There is a significant difference between the knowledge scores regarding care of patients with head injury among staff nurses before and after attending structured teaching programme.

H2 - There is a significant association between the knowledge scores regarding care of patients with head injury among staff nurses and the selected socio-demographic variables.

Materials & Methods

Design and setting: The study used an evaluative approach with preexperimental one group pre-test post-test design.

Variables: Study variables for this study included

1. Independent variable such as structured teaching programme on the care of patients with a head injury.
2. Dependent Variable such as knowledge about the care of patients with a head injury.
3. Socio-demographic variables it includes age, gender, religion, marital status, professional qualification, total work experience in a neuro care unit and undergone any training programme on the care of patients with head injury within the six month period.

Setting of the study The study was conducted among staff nurses working in a neuro care unit in selected hospital, Bangalore.

Sample size: 30 Staff nurses who are directly involved in the care of patients with a head injury.

Sampling technique: Non-probability convenient sampling technique was used to select the sample

Inclusion and exclusion criteria

Inclusion criteria: Staff nurses who are,

1. Working in selected hospitals.
2. Willing to participate in the study.

Exclusion criteria:

Staff nurses who are,

1. Not giving direct patient care.
2. Not available at the time of data collection.
3. Auxiliary nurse- midwife.

Development of tool

After an extensive review of literature and discussion with the experts, structured knowledge questionnaire regarding the care of patients with a head injury was developed by the researcher. The tool comprised of two sections;

Section A

Socio- demographic data: It consists of 7 items which include age, gender, religion, marital status, professional qualification, total work experience in the

neuro care unit, and undergone any training programme on the care of patients with head injury within the six-month period.

Section B

Structured knowledge questionnaire: This section consists of 30 items of structured knowledge questionnaires on the care of patients with a head injury. The items were related to neurological assessment, fast hug assessment and

Nursing management of head injury patients in critical care unit which includes respiratory management, intracranial pressure monitoring, cardiovascular management, skincare management, gastrointestinal care management, glucose management, fluid management, bowel care management, nutritional management, drug management, and preoperative nursing management and post-operative nursing management of the patient with a head injury in the neuro care unit. Correct answers were awarded one mark and wrong scoring with zero marks. Thus the item maximum score was 30 and the minimum score was 0 were allotted.

Data collection procedure

Permission to conduct study was obtained from the institute authority. Staff nurses who met inclusion criteria were selected for study by using a nonprobability convenient sampling technique. The purpose of the study was explained to the subjects and consent was obtained after assuring confidentiality. There were a total of 3 sessions that involved pre-test by using structured knowledge questionnaires followed by a structured teaching programme. The First session was conducted at 8.30 am for nine-night duty staff nurses, the second session at 12.30 pm for ten evening duty staff nurses and third session at 2.30 pm for eleven- morning duty staff nurses. The pre-test was

done by using structured knowledge questionnaires on the care of patients with head injury and duration was 30 minutes. On the same day, 60 minutes of structured teaching programme was delivered by a student researcher. A PowerPoint presentation was used as an educational aid. All staff nurses who fulfilled the selection criteria were selected for study and requested to gather in the auditorium of selected hospital, Bangalore. Lecture cum discussion teaching method was adopted to impart the topic on the care of patients with head injury by using PowerPoint, blackboard, and charts. After the lecture, the questions raised by the group were clarified and informed to attend a post-test on the 8th day, of the pre-test. In that 8th day post-test same pre-test structured knowledge questionnaires was used to evaluate the effectiveness of the structured teaching programme. After completing each session thanked to all respondents who participated in this study and terminated the data collection procedure.

Results

The data analysis was done using descriptive and inferential statistics. SPSS (Version 20) was used to analyze the data. Percentage distributions were computed for socio-demographic variables of subjects. It was observed that most of the subjects 46.7% belong to the age group of 22-28 years of age. The majority of subjects 63.3% were females. The majority of subjects 60% were Hindu. The Majority of subjects 56.7% were married. The most of the subjects 46.7% had done G.N.M. The most of the subjects 50.0% were having 2-4 years of working experience in the neuro care unit and the Majority of staff nurses 93.3% have not undergone any training programme on the care of patients with head injury within the six month period. With regards to Frequency and percentage distribution of level of knowledge regarding care of patients with

head injury among staff nurses working in the neuro care unit was observed that during the pre-test majority of subjects.56.7% had inadequate knowledge and 43.3% had moderate knowledge, whereas in the post-test majority of subjects 63.3% had adequate knowledge and most of the subjects 36.7% had moderate knowledge, whereas Comparison of pretest and post-test knowledge scores was observed that the calculated 't' value is -9.941 is more than the table value (2.045) at $P < 0.001$, so the research hypothesis (H1) stated as "there is a significant difference in knowledge before and after implementation of structured teaching programme" is accepted and with regards to association between pre-test level of knowledge with Selected Socio - demographic variables such as age in years ,gender, religion, marital status, professional qualification, total work experience in a neuro care unit and undergone any training program on the care of patients with head injury management within the six month period were computed and it was observed that there is no significant association between level of knowledge and any selected socio –demographic variables. Hence research hypotheses (H2) stated as "there is a significant association between level of knowledge and selected socio-demographic variables" was rejected.

Discussion

This chapter deals with the discussion in accordance with the objective of the study and hypotheses. The findings obtained from the study are discussed as follows.

To assess the knowledge regarding care of patients with head injury before implementation of structured teaching programme among staff nurses.

The present study of the pre-test findings revealed that the overall mean knowledge score of subjects was

17.00 with a standard deviation of 3.815. This shows that the knowledge of staff nurses regarding the care of patients with a head injury was inadequate. Findings of this study are similar to that of Jintana Damklian et al. who conducted a study to assess the emergency nurses' knowledge of the care of patients with severe traumatic brain injury using an evidence based care bundle in Thai reveals a statistically significant improvement in overall knowledge scores after care bundle implementation ($p < 0.001$). The study suggested that the implementation of an evidence-based care bundle improved emergency nurses' knowledge regarding the management of patients with severe traumatic brain injury.

To evaluate the effectiveness of structured teaching programme on knowledge regarding care of patients with head injury among staff nurses working in selected hospitals.

These findings of the study depicted real evidence of significance between pre-test and post-test knowledge scores. The difference was statically proved that the overall pre-test and post-test knowledge score was found to be 't' = - 9.941 (table value = 2.045) at $P < 0.001$. Hence, the study concluded that a structured teaching programme is effective in improving the knowledge of staff nurses working in neuro care units regarding the care of patients with a head injury. A study conducted by Mariam Sabry Shehab et.al. reveals that mean knowledge score of nurses regarding the care of traumatic brain injury patients were unsatisfactory before the program implementation and satisfied post-program implementation of care of traumatic brain injury patients. This study also recommended that continuous educational programs should be planned on a regular basis to nurses' caring for traumatic brain

injury patients for enhancing nurses' knowledge and practice to achieve the high quality of care.

To find the association between the level of knowledge regarding care of patients with head injury and the selected socio-demographic variables.

Study findings showed that there is no significant association between the levels of knowledge regarding the care of patients with head injury with any of the selected socio-demographic variables. The study findings supported by Nutan Makasare et.al reveals that there is a highly significant ($P < 0.01$) association between the knowledge of the nurses regarding the care of acute head injury patients and selected sociodemographic variables like professional qualification ($\chi^2 = 18.464$), total clinical experience ($\chi^2 = 22.597$), and area of work ($\chi^2 = 48.590$). We observed that in the present study there is no association between level of knowledge with any Selected Socio-demographic variables. Hence the research hypothesis (H2) stated that "there is a significant association between the knowledge scores regarding the care of patients with head injury among staff nurses and the selected socio-demographic variables" was rejected.

Limitations

1. The authenticity of information regarding sociodemographic variables is only based on the response of the samples.
2. Limited sample size.
3. Since the study was conducted only in one hospital, the findings may not be generalizable to other health care settings due to variability in hospital-related factors that may cause changes in the level of knowledge.

Conclusion The present study findings indicated that developed structured teaching Programme (STP) was

effective in improving the knowledge of nurses regarding care of patients with head injury.

Acknowledgement: I would like to express my sincere gratitude to the management of selected hospital Bangalore for providing me the opportunity to undertake the study in their esteemed institute even in times of pandemic. My heartfelt thanks to all the participants who have willingly participated in the study and without whom I would not have been able to complete the research study. Last but not the least I extend my special thanks to all my well-wishers and others who helped me directly and indirectly in completion of the study.

References

1. Gururaj G, Kolluri S.V.R, Chandramouli B.A, (2009), Department of Epidemiology, Neurosurgery and Biostatistics, National Institute of Mental Health and Neurosciences, Bangalore, India
2. Makasare N., and Makasare P. Effectiveness of planned teaching programme on knowledge of nurses regarding care of acute head injury patients, [Internet] 2015 [Cited 3 Feb. 2019];3(5): pp2321-0613.
3. Brunner and Suddarth's (2010), Medical Surgical Nursing", Lippincott Publications, 10th edition, Pp: 1911-1912.
4. Robert E. Capp, M.D., F.R.C.P. (C), K. (2007). An introduction to head injury, 421-423.