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Effectiveness of structured teaching program on knowledge regarding emergency management of head injury among the staff nurses

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Abstract

The current study aimed to evaluate the effectiveness of structured teaching program on knowledge regarding emergency management of head injury among the staff nurses. To assess and compare knowledge regarding the emergency management of head injury among Staff Nurses before and after the Structured Teaching Program. To determine the association between the level of knowledge with selected sample characteristics. The research design used for the Present study was Pre Experimental One Group Pre-Test Post-Test Research Design conducted among 50 staff nurses which were selected using non probability purposive sampling technique. The data were collected by using Sample Characteristics Performa and self-structured knowledge questionnaire. The finding of the study revealed that the mean score of post-test knowledge (23.62) was significantly higher than the mean score of the pre-test knowledge (16.68). The pre-test knowledge of the staff nurse were having significant association with the age ($\chi^2=15.29$), and working experience ($\chi^2=26.66$). Therefore, it was concluded that the structured teaching programme improved the knowledge regarding emergency management of head injury among the staff nurses.

Keywords: Effectiveness, structured teaching programme, knowledge, emergency management of head injury, staff nurses

Introduction

Head injury is defined as “A morbid state resulting from gross or subtle changes in scalp, skull and/or contents of the skull produced by mechanical forces restricted to those forces applied externally to head.” by the National Advisory of Neurological Disease and Stroke Council. Motor vehicle accidents and falls are responsible for most of the traumatic brain injury related deaths^[1]. Head injury is one of the major health problems and is the most common cause of death among young adults^[2]. According to WHO data, head trauma will be third largest killer in the developing countries by the year 2020. A study conducted by the police department in India has identified that on an average one person dies in every six minutes due to road traffic accidents out of which 70% are attributed to head and spinal trauma^[3]. The nurses’ role is extremely important because the expert nurse cognitively manipulates many variables over a continuum of care and, if such tasks are skilfully and successfully performed, the incidence of Secondary brain injury is reduced^[4]. As head injury can occur in any situation, the above study will be helpful in providing an urgent care by the nurses for the problems associated with head injury and to prevent secondary problems. Therefore the study was conducted to evaluate the effectiveness structured teaching program on knowledge regarding emergency management of head injury among the staff nurses.

Methodology

The study was conducted in Rahman Hospitals Pvt. Ltd, Guwahati for a period of one month. A quantitative approach with quasi (one group pre-test –post-test design) was adopted. 50 staff nurses were selected by using purposive sampling technique. The data were collected using sample characteristics Performa, structured knowledge questionnaire on emergency management of head injury and technique used was Paper and pencil techniques. On the first day pre-test knowledge was taken from the sample and on the same day structured teaching programme on knowledge for about 45 minutes was given.

On the day 8th the post test of knowledge was taken. Sample characteristics Performa consisting of 8 items which included: age, gender, work experience, education qualification, marital status, religion, area of work and previous knowledge exposure regarding emergency management of head injury. Structured knowledge questionnaire regarding emergency management of head injury consist of 30 multiple choice questions covering the following areas: meaning, causes, types, clinical manifestation, assessment and management of emergency management of head injury.

Content validity of the tools was established by the suggestion of total 9 experts in the field of medical surgical nursing and neurology. The reliability co-efficient of self-structured knowledge questionnaire was calculated by Karl Pearson coefficient of correlation and found to be reliable (0.98). Ethical consideration: Formal administrative approval was taken from the Director operation of the Rahman Hospitals Pvt.Ltd., and from the Institutional Human Ethical Committee of Rahman Hospitals Pvt. Ltd., Written Informed Consent form was taken from the participants.

Results

Frequency and percentage distribution of Staff Nurses according to Sample Characteristic Shows that majority of the staff nurses 44 (88 %) belongs to 22-27 years of age. In sex distribution, majority of the staff nurses 47 (94%) belonged to female. According to work experience, majority

of the staff nurses 26 (52%) of the staff nurse have below 1 year of working experience. In educational qualification, majority of the staff nurses 26 (52%) belonged to GNM. Regarding marital status, majority of the staff nurses 48 (96%) was unmarried. In religion, majority of the staff nurses 23 (46%) belongs to Christian. In area of work, majority of the staff nurses 27 (54%) of the staff nurse belonged to Intensive care unit ward. In regards to previous knowledge exposure regarding emergency management of head injury, majority of the staff nurses 37 (74%) of the staff nurses have no knowledge regarding emergency management of head injury while 26% (13) have previous knowledge regarding emergency management of head injury.

Table 1 show that there was marked increase in the post test level of score of knowledge regarding emergency management of head injury.

Table 2 shows that the computed 't' value ($t=13.09$, $p<.001$) was found statistically highly significant at 0.05 level of significance which showed that mean score of post-test knowledge was significantly higher than the mean score of the pre-test knowledge. Hence, the research hypothesis H_1 is accepted and null hypothesis H_{01} is rejected.

Chi square test showing the association of pretest knowledge with their selected sample characteristics. There was significant association of previous knowledge with the age ($\chi^2=15.29$, $P<.001$) and working experience ($\chi^2=26.66$, $P<.001$). Therefore, the research hypothesis H_2 is accepted and null hypothesis H_{02} is rejected.

Table 1: Frequency and percentage distribution of staff nurses in terms of level of knowledge regarding emergency management of head injury

N=50

Sl. No.	Level of knowledge	Scores range	Pre-test (f)%	Post-test f(%)
1	Inadequate	1-14 (<50%)	13(26%)	1(2%)
2	Moderate	15-22 (>50 to 75%)	35(70%)	17(34%)
3	Adequate	23-30 (>75%)	2(4%)	32(64%)

Table 2: Comparison of mean, mean difference, standard deviation, standard deviation of difference and t-value of knowledge score before and after structured teaching programme on emergency management of head injury

N=50

Knowledge score	Mean±SD	MD±SDD	t	df	p-value
Pre-test knowledge score	16.68±3.03	6.94 ± 3.75	13.09	49	<.001**
Post-test knowledge score	23.62±3.42				

**Significant at <.05, tab value= 2.680

Discussion

The present study conducted among the staff nurse which reveals that majority (88%) of the staff nurses belonged to 22-27 years of age. In contrast the findings reported by Sabarivel N, Khan A^[5] who conducted a study on students' knowledge of first aid management of head injury which shows that majority 53.3% belongs to age group of 20 years and above.

In the present study, the structured teaching programme on knowledge of emergency management of head injury was effective which showed that that mean score of post-test knowledge (23.62) was significantly higher than the mean score of the pre-test knowledge (16.68). Similar finding were reported by Makasare N, Makasare P^[6], who conducted a study on effectiveness of planned teaching programme on knowledge of nurses regarding care of acute head injury patients depict that there was significant difference suggesting that plan teaching programme was effective in increasing the knowledge of staff nurses ($t=20.94$).

In the present study there was significant association of previous knowledge with the age (15.29) and working experience (26.66) with contrast to another finding by Sabarivel N, Khan A^[5] who conducted a study on effectiveness of structured teaching programme on knowledge regarding emergency management of head injury among college students shows that there was association between the pre-test knowledge and the demographic variable age (11.6), religion (11.4), income of the head of the family (13.4).

Conclusion

The mean post-test knowledge score was significantly higher than the pre-test knowledge score regarding emergency management of head injury among the staff nurses. Therefore the study concludes that the Structured Teaching Programme was effective in enhancing the Knowledge Regarding Emergency Management of Head Injury among the Staff Nurses.

Recommendations

Based on the findings of the present study recommendations offered for future studies are:

- A similar study can be replicated on larger subject thereby findings can be generalized.
- The study can be conducted with different settings for making broad generalization of findings.
- A descriptive study can be conducted to assess the knowledge and practice of college students.
- A true experimental study can be conducted with structured teaching programme on emergency management of head injury.
- A study can be conducted to assess the knowledge among college students regarding emergency management of head injury.
- Various teaching strategies like demonstration, video regarding emergency management of head injury can be developed.

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