To Evaluate Efficacy of Learning Package among Staff Nurses Regarding Neurological Assessment on Patients with Altered Sensorium

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Abstract: *Background: Nursing management of the neurological patient is based upon highly developed nursing assessment and clinical reasoning skill. The nurse must know what parameters to assess, proper technique for assessment and appropriate method of documentation and how to interpret the data to decide what action should be taken. Objectives: To observe the staff nurses regarding neurological assessment of the client with altered sensorium. To prepare and administer learning package on neurological assessment for the client with altered sensorium. To evaluate the efficacy of learning package among staff nurses. Study design: Pre and post test design. Setting: Hospital based study (KaranatkaLingayat Education Society's Hospital and Medical Research Centre, Belgaum.) Method: Structured observation check list was used to identify the practice regarding neurological assessment of patient with altered sensorium, before and after displaying Compact Disk of learning package. Result: The study revealed that efficacy of neurological assessment has increased after administering a learning package. The maximum gain in score was (42.66%) in deep tendon reflexes. The analysis of data also revealed that, the post observation practice score was significantly higher than pre observation practice score (p<0.05). Therefore learning package is a logical solution for neurological assessment of client with altered sensorium.*

Keywords: Learning package, neurological assessment, practice

1. Introduction

The neurological assessment is a key component in the care of neurological patient. It can help nurse to detect the presence of neurological disease or injury and monitor its progress to determine the type of care and gauge the patients' response to intervention. Nurses come across various casualties in their every day work and their main goal is to save life. In these critical situations nurses need to be vigilant and take prompt action in meeting the need of patients with altered sensorium and seriously ill.1

The neurological assessment is one of the core- nursing data base for identifying nursing intervention. The accuracy of the initial assessment and to identify the change, interpret its significance using critical thinking skill and take appropriate action form foundation of neuroscience nursing practice.2

According to British statistics (2004) one million patients get admitted each year globally with head injury and it accounts for one percent of all death.

India has one percent of total number of vehicles in the world where as it accounts for six percent of road traffic accidents, which is highest accident rate in the world.6

Out of total 17510 admissions in KLES hospital, Belgaum,Fifteen percent were with neurological disease including head injury in the year 2004.These neurological cases includes cerebrovascular accidents, meningitis, hepatic encephalitis, and head injury, Altered sensorium resulting from any of the underlying condition which requires efficient, quick and timely attendance.

2. Materials and Methods

Pre-learning package data were collecte from 30 staff nurses selected randomly who were working in neurosurgery intensive care unit, medical intensive care unit & surgical intensive care unit of K.L.E.S. Hospital and MRC, Belgaum for the period of one month from first July to 31st July 2005. The data were collected through observational checklist of selected parameters on neurological assessment of patients with altered sensorium.

Learning package specially prepared & used in this study refers to audio visual aids, which includes practice on neurological assessment regarding vital signs, Glasgow coma scale, deep tendon reflexes and superficial reflexes. The learning package CD was displayed once to these nurses.
After 8 days of displaying CD of learning package post observation were made. To determined the extent to which the learning package has achieve desired effect post learning package score was measured and comp aired with pre learning package score. The data were analyzed by using paired 't' test.

3. Results

The study revealed maximum pre learning package score in the area of vital signs (99.16%).Where as the measurement of practice was totally absent deep tendon reflexes. In the post learning package maximum gain in score was observed in the deep tendon reflexes (42.66%) followed by superficial reflexes and Glasgo coma scale

Table 1: Distribution of practice score of selected parameter on pre & post learning package.

N=30

S.no	Area of practice	Score before showing learning package%	Score after showing learning package%	Gain in score
1	Vital signs	99.7	100	0.3
2	Glasgow Coma Scale	56.7	93.3	36.6
3	Deep Tendon Reflexes	00	42.7	42.7
4	Superficial reflexes	8.9	46.7	37.8

Overall there was significant increase in post observation practice score (t=11.48; p<0.05). The findings revealed that a learning package on neurological assessment was effective to improve the practices of the nurses under study.

4. Discussion

Present study was under taken to evaluate the effectiveness of learning package (Audio Visual CD Rom) displayed to staff nurses about neurological assessment of clients with altered sensorium.

Non assessment of deep tendon reflexes by the nurses in pre-learning package could be due to deficit in their knowledge regarding neurological assessment in this aspect. However, in the post- learning package there was a maximum gain in the score due to awareness created by the learning package.

Computer based learning package can enhance the effective learning which is accepted and enjoyable7. In the pre-learning package, no subjects had good practices of neurological assessment. This could be attributed to the lack of attention to superficial and deep tendon reflex by the subjects, before training as they did not give importance to this aspect of neurological assessment.

Glassgo coma scale practice improved significantly from initial 56.7 % level to 93.3 % level. This enhancement in the knowledge and practice of neurological assessment in weak areas could improve the quality of patient care & there survival.
Crimlik JT conducted a study on neurological assessment for the nurses focusing the need for assessment for the pertinent history and symptom analysis for accurate care5.

Findings of this study can be used by nursing teacher's to illustrate the importance of neurological assessment regarding patient care. In-service education about neurological assessment for staff nurses is a base of neurological disease management.
Nurses have important role in the prevention of further complication and reduction in mortality in neurological conditions which can be achieved through appropriate patient care. The finding of the study high lights areas of superficial and deep tendon reflexes& Glasgow coma scale needing more attention.

Regular displaying learning package can be implemented on all staff nurses since the finding of study reveal the beneficial effect of learning package. The study of finding can be used to bring awareness among the nursing authorities to organize regular displaying learning package for the nursing staff.

5. Conclusion

Learning package is logical solution for neurological assessment of the client with altered sensorium.

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