



EFFECTIVENESS OF CERTIFICATE PROGRAM ON NEUROSCIENCE NURSING

Nursing

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ABSTRACT

The certificate program on center of Excellence Neuroscience nursing with title "Rebuilding Lives" was designed to develop nurses to be proficient in caring and managing patients with neurological disorders. It aims to equip individuals with a comprehensive knowledge and enhance skills of neuroscience nursing in order to provide quality high end patient care. A customized tool kit was designed in consultation with the neuro physicians and surgeons to serve as a guide for the center of excellence activities of the month. All Apollo hospital across the country has taken up the program simultaneously. But the study happened in Apollo hospital Delhi is only presented here. A quasi - experimental one group pretest and posttest research design was opted to assess the effectiveness of the program. A significant difference in the Pre-test and post-test knowledge score of the staff nurses showed that the certification program on neuroscience Nursing was effective.

KEYWORDS

Neuroscience Nursing, Nurses ,certificate program

INTRODUCTION

Professional education is implemented on various platforms, for example, in-service, ward rounds, case presentations, on-the-job (OJT) training, discussions, seminars, conferences, and clinical attachments. Nurses should constantly upgrading their knowledge and skills to keep abreast with the advancement and changes in the nursing profession .A series of well-coordinated training activities should be established for nurses to achieve high clinical competencies and acquire additional skills .

Center of excellence (coe) campaign on Neuroscience Nursing was conducted in the month of June 2019 as a part of clinical differentiation, a lever of Annual operating plan. Neuroscience nursing is a specialty practice. The training has focused on the knowledge and practice of providing specialized care to patient. This training programme has benefited the nurses to develop knowledge and skill to care for patient with neurological conditions efficiently.

MATERIAL AND METHODS

Research approach

The study was conducted using quantitative research approach

Research design

Quasi-experimental one group pretest -posttest research design

Research Setting

In June 2019 the study was conducted in Indraprastha apollo Hospital, New Delhi

Sample and sampling technique

The sample size was 34. Convenient sampling technique was used to select staff from all the units.

Tool

The knowledge of the staff nurses before and after the certificate program was assessed with structured knowledge questionnaire.

The certificate program on center of Excellence Neuroscience nursing with title "Rebuilding Lives" was designed to develop nurses to be proficient in caring and managing patients with neurological disorders. It aims to equip nurses with a comprehensive knowledge and enhance skills of neuroscience nursing in order to provide quality high end patient care. A customized tool kit was designed in consultation with the neuro physicians and surgeons to serve as a guide for the COE activities of the month. All Apollo hospital across the country has taken up the program simultaneously

Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday
					1	2
3	4	5	6	7	8	9
Opening ceremony & Pre-test (Neurology Nursing)	Bell's palsy	Care of patients with Tracheostomy	Multiple neuron disease	Role of physiotherapy in Neurology patients	Parkinson's disease	
10	11	12	13	14	15	16
Dietary management of Neurology patients	Management of stroke patient	End of life care and Agona test	Spinal injuries	Common disease conditions & Medication management	Sedation and Pain Management (Paediatric + Adults)	
17	18	19	20	21	22	23
Control and management of Infections	Management of Meningitis patient	Common mistakes Nurses make	Management of Head injury	Management of Guillain-Barre syndrome patient	Quiz	
24	25	26	27	28	29	30
Nurses visit to Neuro OT	Home care session for patient attendees	Biomedical equipment	Case presentation	Multiple sclerosis	Closing ceremony & Post test	

Fig: 1 Showing Neuroscience nursing toolkit of activities.

The implementation details regarding the classes and activities are as follows

- **Opening Ceremony:** The neuroscience Nursing COE started with an opening ceremony. Doctors and surgeons from Apollo Institute of Neuroscience, Unit Head/ HOD's/ Nurses from relevant areas/ Nursing leadership team were invited. The calendar of activities of the month was showcased. Pre-test was conducted to all the participants.
- **Care of Patient with Bell's palsy:** Interactive session on Symptoms / Causes / Risk factors and management of patient with Bell's palsy was discussed.
- **Care of patients with Tracheostomy:** Demonstration and return demonstration was conducted for all the candidates on care of patient with Tracheostomy by senior Intensivist.
- **Multiple Neuron Disease:** Detailed class on Motor Neuron disease was discussed by senior consultant of Neurosciences.
- **Role of Physiotherapy in neurology patients:** Chief of physiotherapy has taken an informative session on the role of physiotherapy in neurology patients and the contribution of nurses for the same.
- **Parkinson's disease:** The session taken on Parkinson's disease has covered all details regarding causes, risk factors, medical & nursing management of the patient.
- **Dietary Management of Neurology Patient:** The chief of dietetics has taken an enlightening session on the dietary requirement of patients with neurological disorders and common myths regarding the same.
- **Management of stroke patients:** The neurologist has taken an informative session on stroke warning signs and nursing care of patient with stroke.

- **End of life care and Apnoea test:** The multipurpose health worker has taken class on end of life care and how to deal with the patient's family and nurse's role in such situation.
- **Spinal Injuries :** The neurosurgeon has taken an interesting session on causes, types and care of patient with spinal injuries with video presentations
- **Common disease conditions & Medication management:** All common disease conditions ,symptoms & risk factors were discussed along with the medication management which include preparation / administration / monitoring and disposal and recognizing ADRs & its management and also the Safety & Custody of high cost medications.
- **Sedation and Pain management :** The senior Intensivist has taken an educational class on sedation and management of the patient under sedation and the pain nurse has taken session on main and its nursing management
- **Control and management of infections:** The infection control department head has taken a detailed discussion on care of patient with neurological conditions in infection control perspective.
- **Management of meningitis patient:** Detailed class on meningitis ,its causes ,symptoms ,management and nursing care was discussed by senior consultant of neuro sciences
- **Common mistake made by Nurses:** Common mistakes made by the nurses /common complaints consultants make / quality team feedback happened in past 1 year were collected and analyzed and the nursing team leaders feedback and nurse's feedback were also analyzed and show cased in the class. The class was taken by a doctor with focus on prevention of such incidents
- **Management of head injury:** Senior neuro surgeon has taken an interactive session on management of patient with head injury.
- **Management of Gullian barre syndrome patient :** Gullian barre syndrome was discussed in detail with video presentations
- **Quiz:** All the participants were divided in group and quiz competition was conducted for them with preliminary rounds and final quiz with 5 rounds and three winning teams were selected.
- **Nurses visit to Neuro OT:** An observational visit was arranged for the nurses from the ward to the operations theatre to witness the neurosurgeries and surgeons have taken classes to nurses in the theatres emphasising post-operative nursing care.
- **Home care session of patient attendant :** The nursing executive of Apollo home care has taken session for patient attenders about home care facility
- **Biomedical equipment:** The biomedical engineer has taken session regarding management of the biomedical equipment's used in patient care, common mistakes by nurses in using the equipment and its management.
- **Multiple sclerosis:** Interactive session on Symptoms / Causes / Risk factors and management of patient with multiple sclerosis was discussed.
- **Closing ceremony and Post-test:** Closing ceremony was organised and all the participants were felicitated with certificates, and the participants who scored highest in pre& post-test were given a token of appreciation.

RESULTS

The pretest and post score was analyzed to assess the effectiveness of the certificate programme.

Table 1: Frequency Percentage distribution of the knowledge score of the staff nurses before and after the program

N=34

S/No	Knowledge score	Pretest		Post test	
		Frequency	Percentage	Frequency	Percentage
1.	Poor Knowledge [0-16]	1	3	0	0
2.	Average Knowledge [17-32]	33	97	20	59
3.	Good Knowledge [18-50]	0	0	14	41

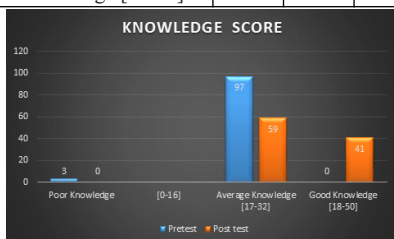


Fig: 2 Shows the percentage distribution of the increase in knowledge score after the certificate program

Table 2 Effectiveness of the structured teaching program ['t' test]

Item	Mean	Standard deviation	Mean difference	Standard error of mean difference	"t" test
Pre test	22.8	3.4	6.3	1.2	5.25
Post test	29.1	6.3			

The calculated 't' value 5.25 is more than the table value 1.67 at df 66 reveals that the mean difference between the pretest and posttest score is significant at 0.05 level of significance and not by chance. So the one month certification program on neuroscience nursing was effective in increasing the knowledge of the staff nurses.

CONCLUSION

The campaign enriched the knowledge of nurses about the neurological conditions and its treatment, to improve the quality of life of patients. It enhanced the competency of nurses for providing better nursing care to the patients. The nurses gained knowledge about various conditions, risk factors, screening, and the importance of early diagnosis. An awareness was created among the nursing staff about Pain management, infection control practices, Handling of biomedical equipment. A momentous consciousness has been created among the nurses on the common mistakes done by them and how it can be rectified. It has benefited them to understand the role of physiotherapy and nutrition in the recovery of the neurology patients. The nurses gained confidence to deal with patients and their families. Overall this training programme has benefited the nurses to develop knowledge and skill in care of patient with neurological conditions efficiently.

REFERENCES

1. www.nni.com.sg