

# A Study to Evaluate the Structured Teaching Programme on Knowledge regarding Neurological Examination among Nursing Students in Selected College of Nursing, Dehradun, Uttarakhand

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## Abstract

The objective of the study is to assess the knowledge of Neurological Examination furthermore to find out the mean difference between pre and post test score as well as association between the pre test level of knowledge and with their demographic variables. A pre-experimental study was conducted on Neurological Examination with 54 nursing students of Basic Bsc 3<sup>rd</sup> year in State college of nursing, 107 Chander nagar Dehradun.. The Pre test data was collected by using self-administered questionnaire and mean was of (12.2). The obtained data was analyzed using descriptive statistics. (Teaching was given regarding anatomy and physiology of nervous system as well as OSPE conducted for neurological examination. After 7 days of intervention post test was conducted for the same group of students and mean score was (16.8).SD of the pre and post test score was (2.9&1.91) and t test was done to find out the difference between pre and post test score. Calculated' T 'value is (5.9) and tabulated value is 2.66. So findings are suggesting that calculated value is higher than tabulated value. It shows that the effectiveness of structured teaching on Neurological Assessment. Further there was association of knowledge of neurological examination with their demographic variables and it was statistically significant at  $p < 0.05$  level. The study findings conclude that the student nurses had good knowledge after structured teaching programme regarding neurological examination.

**Keywords:** Neurological Examination, mental disorder, diagnosis, mean score.

## Introduction

“The brain is the organ of destiny. It holds within the it's humming mechanism Secrets that will determine The future of the human race.

Wilder Penfield.

The nervous system is enormously keen system which regulates and integrates the body actions. Conducting neurological assessment depends on the professional's knowledge as regards structure of nervous system and its function and very entirely the skills required to identify and interpret abnormalities.<sup>1</sup>

Neurological examination is not as similar as physical examination. It is a vital evaluation of the performance of the nervous system there by assessing the functioning of definite parts of the body which

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are operated through nervous system. Neurological examination provides us the critical report about function of Brain.<sup>2</sup>

Neurological examination consists of both anatomical and functional assessment. In this we basically assess the physical function, mental function, motor function and sensory functions. Neurological examination plays a very vital role as the neurological disorders are very critical and through this examination we can critically evaluate the client and can take prompt actions.<sup>1</sup> With increased occurrence of neurological crisis, cerebro-vascular accidents, road traffic accidents and other neurological issues, neurological examination has become more important for healthcare personnel's caring the patients.<sup>2</sup>

Assessing client emotion a neurological disorder is a challenge to the student nurses. Neurological disorders are mostly critical and major concern for each day living activities & existence.

Advanced nursing assessment and clinical cognitive skills are necessary for managing Neurological patient and in providing Nursing Care. Working nurses must know the proper parameters to be evaluated, correct practice for assessing the patient and appropriate way of recording. Nurses should be able to understand the recorded data, and should know to identify the noticeable variations in the neurological examination.<sup>3</sup>

World Health Organization reported, up to 1 billion people worldwide are affected by neurological disorders range from migraines to epilepsy and dementia, and this figure will increase with population's age.<sup>4</sup>

But literature reveals that they are not competent enough in neurological examination, either they have

insufficient knowledge or lack of opportunity to practice their skills because of various reasons. The above mentioned factors like lack of knowledge, time, skills, confidence and competency of nursing students regarding neurological examination motivated the investigator to develop a video assisted teaching programme with the purpose of helping the student nurses acquire and update the knowledge and skills and be competent in neurological examination.

## **Methodology**

The study design used was pre experimental study design. Samples were selected through convenience sampling. 54 students were contributed in this study. The study was conducted among Basic Bsc 3<sup>rd</sup> year nursing students of selected college of nursing in Dehradun city.

From a population of about 500 student nurses studying in the same college were selected and the study was conducted, 54 Basic Bsc students were participated in this study. The Participants were contacted directly and were asked for their willingness to contribute in the study. Survey was sent through Google form to almost 54 students. Data collection was done in the month of august 2021. 20 minutes were given to solve the questions, as it has time limit. Data was analyzed using the SPSS 20.0 version. Ethical approval was acquired from the Institute Research.

## **Result**

**Section I: Demographic Variables** Most of Age of the participants were (1,85%) of 19 year students. Half of age group were (20.3%) of 20 years. Maximum (77.7%) of students were in their 21-30 years. 7% of male students and 93% students are females. 96.2% students are Hindu religion . Muslims

were 1.85% & Christians were 1.85 %. Type of stay 51.5% students are coming from home and 48.5% students are staying in hostel. 41.5% of students are having previous experience regarding neurological examination and 58.5% were not having previous experience of neurological examination. 68.4% students had a source of information regarding neurological examination from health professionals. 23.5% from mass media, 16.6 from friends and 9.1% having Nill source of knowledge.

## **Section II: Knowledge about Neurological Assessment**

18% of the participants knew what Neurological Assessment is. Only (15%) responded appropriately to the question, relating to the components of the Neurological Assessment. Only 5% of the members knew that vital signs are not a part of the Neurological Assessment. About (16 %) of the nurses knew how to conduct the Neurological Assessment. Results indicated effectiveness of structured teaching programme on neurological examination among student nurses is good.

**Discussion** Present work was done to evaluate the effectiveness of students about the Neurological Assessment and identify demographic factors associated with their knowledge. Post test mean score level (16.8) is higher than the pre test mean score (12.2). It shows that the effectiveness of structured teaching programme of neurological examination. It is recommended that studies should be conducted on other Medical personnel too.

**Conclusion** The current study displays that the effectiveness structured teaching programme on Neurological examination among student Nurses studying in selected college of nursing of Dehradun city is good. We as the part of the healthcare team should take some improvement steps and make our student nurses more efficient and skilful by doing other teaching strategies.

It is recommended that studies should be conducted on other Medical personnel too.

**Table:.1 ASSOCIATION BETWEEN PRE-TEST LEVEL OF KNOWLEDGE OF NURSING STUDENTS REGARDING NEUROLOGICAL ASSESSMENT AND THEIR SELECTED SOCIO DEMOGRAPHIC VARIABLES .**

S.NO	Demographic characteristics	Frequency	Percentage	Chi square
1	Age			
	19 years	1	1.85%	4.42
	20 years	11	20.37%	NA
	21-30 years	42	77.7%	
2	Gender			
	Male	4	7.4%	2.5
	Female	50	92.59%	NA

**Cont... Table:.1 ASSOCIATION BETWEEN PRE-TEST LEVEL OF KNOWLEDGE OF NURSING STUDENTS REGARDING NEUROLOGICAL ASSESSMENT AND THEIR SELECTED SOCIO DEMOGRAPHIC VARIABLES .**

3	Religion Hindu Muslim Christian Sikh	52 1 1 0	96.2% 1.85 1.85 0	48.49 S
4	Type of Stay Home Hostel	28 26	51.85% 48.14%	0.243 NA
5.	Previous knowledge regarding Neurological Assessment Yes No	22 32	41.5% 58.5%	3.032 NA
6.	Source of knowledge regarding practice Nil Mass media Friends Health Professionals	10 13 1 30	18.5% 24.07% 1.85% 55.5%	31.15 S

\*\*Significant at  $P \leq 0.05$  level, S: Significant, NS; Non significant

**Table-7** describes the association between pre-test level of knowledge of nursing students regarding neurological assessment and their selected socio demographic variables in experimental group. The obtained chi square values for Religion and source of knowledge regarding practice were higher values

(48.49 and 31.15 respectively) when compared to the table value 6.6 at  $P \leq 0.05$  level of significance. So there is a significant association between pre-test level of knowledge of nursing students with their socio demographic variables like a type of Religion and source of knowledge regarding practice in experimental group. Hence research hypothesis H2 is accepted.

**Table No.2 Criterion measure of Knowledge of pre test Score**

Levels of Knowledge	Knowledge Score	Range of Score	Frequency	Percentage
Good	Above 75%	21– 30	04	7.4
Average	50 – 75 %	11- 20	45	83.3
Poor	Below 50%	01 - 10	5	9.25

**Table No.3 KNOWLEDGE REGARDING NEUROLOGICAL ASSESSMENT AMONG NURSING STUDENTS****Table-: Effectiveness Structured teaching on knowledge regarding neurological assessment among nursing students**

Group	Aspect	Level of knowledge		Paired t'test
		Mean	SD	
Experimental Group	Pre test	12.2	2.90	23.38
	Post test	16.8	1.91	18.60

\*\*Significant at  $p \leq 0.01$  level, df 29, t-value 2.6

Table 3 depicts the effectiveness of structured teaching on knowledge regarding neurological assessment among nursing students. It is inferred that, in experimental group the overall paired 't' test value was 18.60, it is significant in table value 2.6 at  $p \leq 0.01$  level. So it is proved that the structured teaching was effective in improving the knowledge of nursing students regarding neurological assessment. The obtained 't' value 18.61 in experimental group was higher than table value 2.6 at  $p \leq 0.01$  level; hence the hypothesis H1 is accepted.

**Conflicts of Interest:** Nil

**Source of Funding:** Nil

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