ARTICLES

EFFECTIVENESS OF GROUP LEARNING VERSUS CONCEPT MAPPING ON KNOWLEDGE REGARDING ADULT RESUSCITATION AMONG 2ⁿᵈ B. Sc. YEAR NURSING STUDENTS

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ABSTRACT:

Introduction: Nursing students are exposed to a vast amount of information and reading material that is very specific technical and new to the students. Critical thinking explicitly aimed at well-founded judgment, utilizing appropriate evaluative standards in an attempt to determine the true worth, merit or value of something. The educational process seeks to produce growth in cognitive development.

Objectives: 1. To assess the pre-test level of knowledge regarding adult resuscitation among 2ⁿᵈ year B. Sc. nursing students in both the group. 2 To compare the effectiveness of concept mapping and group learning on knowledge regarding adult resuscitation among 2ⁿᵈ year B.sc nursing students. 3. To find association between knowledge level with selected demographic variables in both the group.

Methodology: In the present study the research design used is non-randomized pre-test post-test design. The 30 samples for each group were selected by purposive sampling technique. Pre tested, validated self-administered tool was used to collect the data.

Result: The results shows in pre-test majority of nursing students 26.33%in experimental group and 29.86% in control group having inadequate knowledge regarding CPR but in the post test experimental group scored 56% adequate knowledge and 40 % in control group. The paired't' test computed between pre and post-test knowledge score was statistically significant at 0.05 levels. The calculated 't' value 6.9 is greater than table value. The result shows there was significant association between knowledge and demographic variables such as age, gender.

Interpretation and conclusion: The results showed that the mean post test score higher than mean pre-test score. Thus it can be concluded that there is significant improvement in the knowledge in the group who got concept mapping than the group learning on adult resuscitation.

Key Words: Concept mapping, group learning, 2ⁿᵈ B.Sc. Nursing students.

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INTRODUCTION

Nursing education aims to provide an appropriate level of knowledge and skills in nursing students. Improving the quality of nursing care requires obtaining high levels of knowledge and skills during nursing training period.[1]

Health care needs of the population are increasing in its complexity and diversity today. The demand for quality in care and improved health outcomes is also on the rise.[2] To meet this growing demand and need, nurses need to be not only compassionate professionals but must be individuals who can exhibit critical thinking and problem solving skills. Traditional nursing education methods aim to prepare nursing students to provide comprehensive and competent nursing care without adequate emphasis on critical thinking that enhances nurses to analyse, prioritize, and organize new information. However, the need for critical thinking ability for nurses has been recognized now and nurse educators have initiated efforts to imbibe critical thinking proficiency in nursing students through class room and clinical teaching methods.[3]

Concept mapping is considered most useful tool in education worldwide. It was developed by Novak in 1970's for visualizing the relationship among different concepts in his study.[4] Concept mapping is an advanced educational method based on Ausubel's Assimilation theory. According to this theory, learning occurs when newly learned information is linked with the information previously stored in the brain. Concept map is a visual presentation of the meaningful relationship between concepts in a hierarchical structure which promote absorption capacity of the students about certain topics. It is a graphical method for representing a set of concepts which are placed in a thematic framework.[5]

STATEMENT OF THE PROBLEM

Effectiveness of Group Learning Versus Concept Mapping On Knowledge Regarding Adult Resuscitation among 2nd B.Sc Year Nursing Students.

OBJECTIVES

1. To assess the pre-test level of knowledge regarding adult resuscitation among 2nd year B. Sc. nursing students in both the group.
2. 2 To compare the knowledge of the students in both groups of concept mapping and group learning by means of post -test.
3. 3. To find association between knowledge level with selected demographic variables in both the group.

METHODS AND MATERIALS

HYPOTHESIS

H1: There will be significant difference in knowledge level between group teaching and concept mapping.

H2: There will be a significant association between the gains in knowledge scores of students with selected demographic variables in group with concept mapping.

RESEARCH APPROACH

An evaluative approach was adopted to accomplish the objectives of the study.

RESEARCH DESIGN

Quasi experimental study

POPULATION

In this study population consist of Second year B.Sc. (N) students

SAMPLE

Sample selected for this study Second year B. Sc. (N) students

SAMPLE SIZE

A total of 60 Second year B. Sc. (N) students.

SAMPLING TECHNIQUE

In this study Simple random sampling by using lottery method.

INDEPENDENT VARIABLES

Concept mapping and group learning.

DEPENDENT VARIABLES

Knowledge on Adult resuscitation. 30 for concept mapping group and 30 for group teaching group.

METHOD OF DATA COLLECTION

The permission was obtained from concerned authority. The investigator established good rapport with samples. Oral consent from each participant was obtained after collecting background data and pre-test was conducted on knowledge on adult resuscitation. Pre-test was given then concept mapping and group teaching was introduced to group 1 and group 2respectively later post-test was given after 7 days.

TOOL USED FOR THE STUDY

The investigation developed the tool as follows

Section I

It comprised of 4 items seeking information on demographic data such as age, gender, religion and previous knowledge on adult resuscitation.

Section II

It consisted of 20 structured questionnaires on adult resuscitation. Each item has one correct response and each item carries score of one. The maximum possible score was 20 and minimum possible score was 0.

PLAN FOR DATA ANALYSIS

- Demographic proforma was analysed in terms of frequency and percentage.
- The knowledge score was analysed by using frequency, percentage, mean, mean percentage and standard deviation.
- Effectiveness and comparison of concept mapping and group learning was analysed by using paired 't'test.
- Association between gain in knowledge scores with selected demographic variables was calculated by using chi- square test.

RESULTS

Analysis of the study finding are categorized and presented under the following headings:

Section I: Description of the demographic variables of nursing students. (Table 1).

Section II: Distribution of samples according to their level of knowledge scores of the nursing students. (table2)

Section I11: Data on effectiveness of concept mapping and group learning. (Table 3)

Section 1V: Association between gain in knowledge score with selected demographic variables. (Table 4)

Table 1: Description of the demographic variables of nursing students.

N=60

SL.NO	DEMOGRAPHIC VARIABLES	EXPERIMENTAL GROUP		CONTROL GROUP	
		f	%	f	%
1	Age 19 20	25 5	41.6% 8.33%	27 3	45% 5%
2	Gender Male Female	0 30	0 50%	4 26	6.66% 43.33%
3	Religion Hindu Christian	6 24	10% 40%	18 12	30% 20%
4	Previous knowledge regarding CPR Yes No	18 12	30% 20%	13 17	21.66% 28.33%

Table 2: Section II: Distribution of samples according to their level of knowledge scores of the nursing students.   **N=60**

Level of Knowledge of Nursing students	Concept mapping group		Group learning group	
	Pre-test level of knowledge	Post-test level of knowledge	Pre-test level of knowledge	Post-test level of knowledge
	Frequency	Frequency	Frequency	Frequency
Inadequate	4	0	7	1
Moderate	26	3	21	16
Adequate	0	27	2	13

Table 3: Data on effectiveness of concept mapping and group learning.
N=60

Group	Pre-test	Post-test	Student Paired ' t ' test	(Difference = Post-test-pre-test)	Independent 't'-test
Concept mapping group	4.80±1.77	15.20±2.31	t=23.4 P=0.001 significant	10.4± 2.43	t = 19.93 P = 0.001 significant
Group teaching group	4.53±1.47	4.70±1.55	t=0.65 P=0.52 not significant	0.17±1.41	

t$_{(59)}$ = 1.96   highly significant at p≤0.0

Table 4: Association between gain in knowledge score with selected demographic variables.
N=60

SL NO	Demographic Variables	Concept mapping group	Group Learning group	Median				Chi-square Value
				Below median < 18		Above median >18		
1	Age 19 20	25 5	19 20	19 4	16 3	6 1	7 4	**0.017* S**
2	Religion Hindu Christian	6 24	14 16	4 19	10 15	2 5	3 2	**0.022* S**
3	Previous knowledge regarding CPR Yes No	8 12	12 18	12 11	10 8	6 1	7 5	0.46* NS

S= Significant   NS=Not Significant

DISCUSSION

The findings of the study indicated that concept mapping was effective in increasing the knowledge of nursing students when compare with group learning method.

CONCLUSION

Concept mapping was better than conventional skill teaching methods. It can be used as a clinical teaching learning activity to promote critical thinking in nursing students. It can also improve academic performance in problem solving approach. Future graduate nurses will be required to use critical thinking, designing, analysing and solving various problems as they may face in any situation in the modern health care, where new advanced and sophisticated technologies are to be used. As we embrace the best teaching practice of concept mapping we will be able to develop critical thinking among nurses which is a mandate.

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