

EFFECTIVENESS OF MIND MAPPING ON ACTIVE LEARNING STRATEGY

Ms. Mogana.R¹, Mrs. Sindhumathi. R², Dr. Jeyagowri. M³

¹M. Sc (N), Department of Child Health Nursing, CON-EIMS, Puducherry.

²Assistant Professor, Department of Mental Health Nursing, CON-EIMS, Puducherry.

³Principal, Department of Child Health Nursing, CON-EIMS, Puducherry.

ABSTRACT:

Introduction: A Mind Mapping is a graphical way to represent ideas and concepts. It is a visual thinking tool that helps structuring information, helps you to analyse, comprehend, synthesize, recall and generate new ideas in a better way. **Aim:** The purpose of the study is to evaluate the effectiveness of mind mapping on active learning strategy. **Method:** The study was conducted using one group pre-test post-test design in December 2021. A sample of 42 students were selected by using convenient sampling technique. Data collected through Rubric Scale and structured student evaluation questionnaire. **Result:** The statistical outcome such as mean and standard deviation of pre-test and post-test score of rubric scale score were shown in the Table 4 and Figure 4. Out of the maximum score of 28, the students had attained mean of **23.43** in pre-test with standard deviation of **3.101** and mean of **26.14** in post-test with standard deviation of **1.464**. The statistical outcome such as mean and standard deviation of effectiveness of mind mapping on active learning strategy among III-year B. Sc Nursing students were shown in the Table 5 and Figure 5. Mean of **-2.714** with standard deviation of **2.430**. There is a significant difference between the pre-test and post-test score regarding mind mapping among B. Sc Nursing- III year students. **Conclusion:** The study will help the students to promote active learning strategy and critical thinking.

Key words: Mind Mapping, Active Learning Strategy, Rubric Scale, Structured Student Evaluation Questionnaire.

INTRODUCTION

A 'Mind map' is a diagram used to indicate the words, ideas linked and arranged around a central topic or an idea. It is a learning tool that is a simple method to visualize a concept. The effort toward enhancing active learning was based on the concern, expressed by experienced medical educators, that students memorized facts in spite of understanding and applying concepts. Mind mapping is a visual technique where information and knowledge are converted into a hierarchical diagram, formatted and illustrated, with structural key terms. It is associated with a theme helping students to understand certain contents better, integrate it and memorize it faster. In this context, a possibility arises of using a graphical technique called mind mapping created by Buzan in the process of presenting knowledge. This technique has been used in a variety of activities and by various professionals in the educational field. It serves to facilitate and improve the learning process. As the mind mappings are entirely structural their applications in teaching and learning are not restricted to a particular context or knowledge domain.

A study to evaluate the effectiveness of mind mapping on active learning strategy among III year B.Sc Nursing students in College of

STATEMENT OF THE PROBLEM

Nursing, East Coast Institute of Medical Sciences, Puducherry.

OBJECTIVES

- To assess the active learning strategy
- To evaluate the effectiveness of mind mapping on active learning strategy.
- To associate the active learning strategy with selected demographic variable.

HYPOTHESIS:

H₁: There is a significant difference between the pre-test and post-test score among III - year B. Sc Nursing students.

ASSUMPTION:

1. Mind mapping induces the interest in learning and easy to understand.
2. Active learning increases the cognitive skill.
3. Active learning improves critical and creative thinking.

LIMITATIONS:

1. Samples were limited to III year- B. Sc Nursing students

2. Samples were limited to 42 students
3. Samples drawn from College of Nursing, East Coast Institute of Medical Sciences.
4. Duration of the study was limited to 1 week.

METHODOLOGY:

Research Approach

The research approach is a plan and procedure that consists of the steps of broad assumptions to detailed methods of data collection. A **quantitative research approach** was used for this study.

Research Design

Research design is the framework of research methods and techniques chosen by a researcher. **Pre – experimental (one group pre-test post-test)** design was used for this study.

Variables of the Study

A variable is any property, a characteristic, a number, or a quantity that increases or decreases over time or can take on different values in different situation.

Dependent variable: Active learning strategy among III – year B. Sc Nursing students.

Independent variable: Mind mapping technique

Attributing variable: Demographic variables such as age, gender, education, interest in reading books, socio – economic status, religion, type of dwelling, type of family and parental profile of age, education, occupation.

Study Setting

The III-year B. Sc Nursing students were selected. The samples were drawn from **College of Nursing, East Coast Institute of Medical Sciences at Puducherry**. They were selected by using Non-probability Convenience sampling technique.

Population

A population is the entire aggregation of cases in which a research is interested. In the present study the population comprised of **all B. Sc Nursing students** in College of Nursing, East Coast Institute of Medical Sciences at Puducherry.

Sampling Technique

Sampling is the process of selecting a portion of the population to represent the entire population. In the present study **Non-probability Convenient sampling technique** was used to select the sample.

Sample

A sample is a small manageable portion of population having same characteristics selected for observation and analysis. In the present study sample consists of **all III-year B. Sc Nursing students** in College of Nursing, East Coast Institute of Medical Sciences at Puducherry.

Sample Size

Sample size is the number of elements that can be selected for a research. The sample size of the study consist of **42 students (n=42)**.

DATA COLLECTION PROCEDURE:

Data collection is the gathering and measuring of information on variables of interest to address a research problem. Permission was obtained from concerned authorities in College of Nursing, East Coast Institute of Medical Sciences. The purpose of the study was explained to the subjects and informed consent was obtained before conducting the study. Confidentiality of the responses were assured and maintained throughout the study. The data collection was done for a period of 1 week. Data were collected by using a standardized Rubic Scale to assess the effectiveness of mind mapping and student evaluation structured questionnaire to assess the active learning strategy among III year B. Sc Nursing students.

RESULT: The Table-1 shows the frequency and percentage distribution of students according to the active learning strategy regarding Mind Mapping.

The scoring interpretation of the active learning strategy was seen into 3 categories, inadequate, moderate and adequate. (0%) had inadequate knowledge, (7.1%) had moderately adequate and (92.9%) had adequate knowledge among III year B. Sc Nursing students.

The Table-2 shows the frequency and percentage distribution of students according to the pre-test Rubric scale scoring regarding Mind Mapping was seen into 3 categories, inadequate, moderate and adequate. (0%) had inadequate knowledge, (14.3%) had moderately adequate and (85.7%) had adequate knowledge.

The Table-3 shows the frequency and percentage distribution of students according to the post-test Rubric scale scoring regarding Mind Mapping was seen into 3 categories, inadequate, moderate and adequate. (0%) had inadequate knowledge, (0%) had moderately adequate and (100%) had adequate knowledge

The statistical outcome such as mean and standard deviation of pre-test and post-test score of rubic scale score were shown in the Table 4. Out of the maximum score of 28, the students had attained mean of 23.43 in pre-test with standard deviation of 3.101 and mean of 26.14 in post-test with standard deviation of 1.464.

The statistical outcome such as mean and standard deviation of effectiveness of mind mapping on active learning strategy among III-year B. Sc Nursing students were shown in the Table 5 and Figure 5. Mean of -2.714 with standard deviation of 2.430. There is a significant difference between the pre-test and post-test score regarding mind mapping among B. Sc Nursing- III year students.

The association of active learning strategy with selected demographic variables, where the result shows that there was no association of active learning strategy with the demographic variable.

TABLES AND FIGURES:

Table 1: Frequency and percentage distribution of active learning strategy on mind mapping

| Category | Score | No. of. Group | |
|------------|-------|---------------|-------|
| | | Number | % |
| Inadequate | 9-22 | 0 | 0% |
| Moderate | 23-34 | 3 | 7.1% |
| Adequate | 35-45 | 39 | 92.9% |

Figure 1: Frequency and percentage distribution of active learning strategy on mind mapping

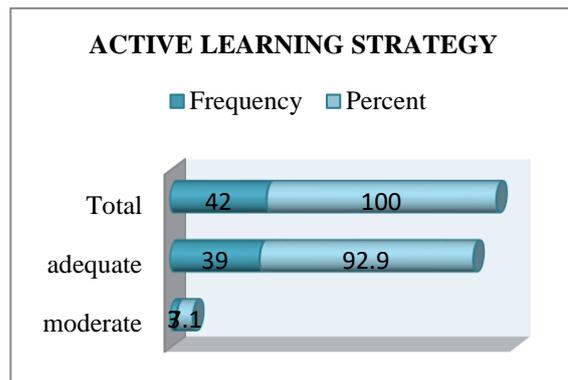


Table 2: Frequency and percentage distribution of rubic scale scoring interpretation based on pre-test

| Category | Score | No. of. Group | |
|------------|-------|---------------|-------|
| | | Pre-test | % |
| Inadequate | 7-14 | 0 | 0% |
| Moderate | 14-20 | 1 | 14.3% |
| Adequate | 21-28 | 6 | 85.7% |

Figure 2: Frequency and percentage distribution of rubic scale scoring interpretation based on pre-test

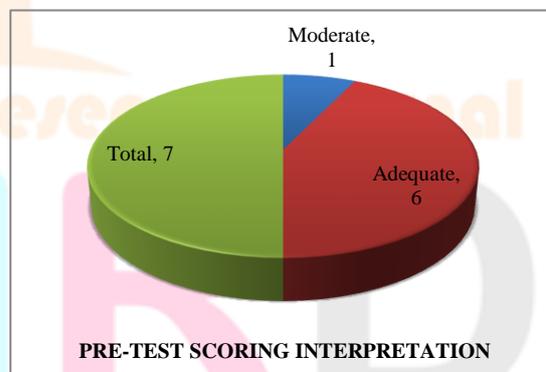


Table 3: Frequency and percentage distribution of rubic scale scoring interpretation based on post-test

| Category | Score | No. of. Group | |
|------------|-------|---------------|------|
| | | Post-test | % |
| Inadequate | 7-14 | 0 | 0% |
| Moderate | 14-20 | 0 | 0% |
| Adequate | 21-28 | 7 | 100% |

Figure 3: Frequency and percentage distribution of rubric scale scoring interpretation based on post-test

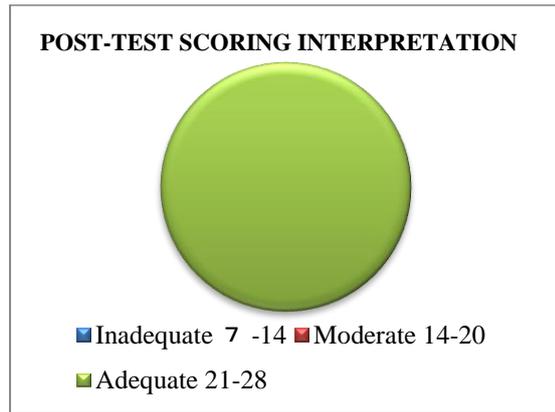


Figure 5: Mean and S.D of effectiveness of mind mapping on active learning strategy among III-year B. Sc Nursing students

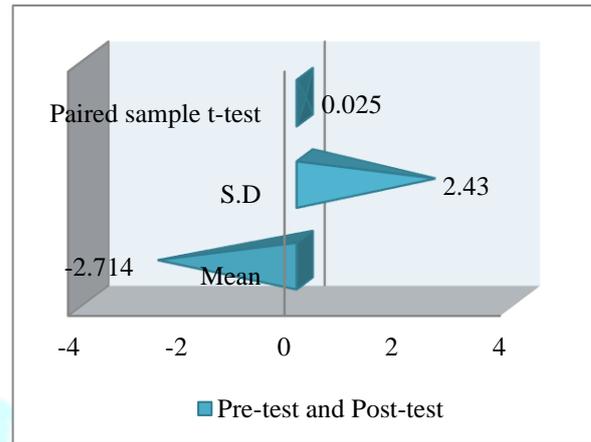


Table 4: Distribution of Mean and standard deviation of pre-test and post-test score of rubric scale score

| S. No | Rubic Scale | N | Mean | S.D |
|-------|-------------|---|-------|-------|
| 1. | Pre-test | 7 | 23.43 | 3.101 |
| 2. | Post-test | 7 | 26.14 | 1.464 |

Figure 4: Distribution of Mean and standard deviation of pre-test and post-test score of rubric scale score

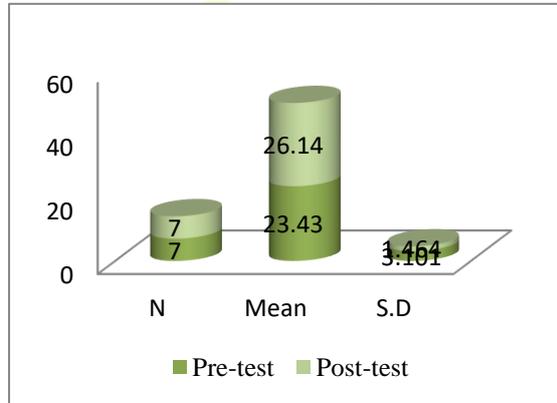


Table 5: Mean and S.D of effectiveness of mind mapping on active learning strategy among III-year B. Sc Nursing students

| Effectiveness | Mean | S.D | Paired sample t-test | P value (0.05) |
|------------------------|--------|-------|----------------------|----------------|
| Pre-test and Post-test | -2.714 | 2.430 | -2.955 | 0.025 |

DISCUSSION:

The study findings revealed that mean and standard deviation of pre-test score of rubric scale score is 23.43 ± 3.101 and post-test score of rubric scale is 26.14 ± 1.464 . The statistical outcome such as mean and standard deviation of effectiveness of mind mapping on active learning strategy among III-year B. Sc Nursing students of -2.714 ± 2.430 respectively finds that the mind mapping is effective on active learning strategy to bring the desired result among III year B. Sc Nursing students.

CONCLUSION:

Generally the students have difficulty in learning and reading the subject matters. That has been overcome through reading the content by using mind mapping technique will lead to easy learning. Therefore, this technique has to be implemented among the students and found that they gave the desired results after a week of intervention.

RECOMMENDATION:

- ✦ The study can be conducted among school students.
- ✦ The study can be conducted among other than nursing college students.
- ✦ The study can be conducted to evaluate the effectiveness of mind mapping among students of experimental and control group.

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