

Use Of Concept Mapping As A Learning Tool Among Nursing Students – A Pilot Study.

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INTRODUCTION

There has been an advancement in the field of Education. Nursing profession has also witnessed reforms in the Nursing education system. Teaching has become more student oriented and based on new technologies and practical approach. Since years Traditional method has been followed. Innovative strategies improve learning, enhances motivation and develops self-control and develops self-learning abilities (Sailaxmi, Mythili, & Thirumorthy, 2015). Nursing teachers have knowledge about the different innovative teaching methods. 96% teachers expressed the need of bringing about modification in the traditional method of teaching to develop competent nurses and provide quality care (Ashalata, Vaishali, Dhanraj, Santosh & Arunima, 2016).

For developing Critical thinking and judgement skills in Nurses various methods like case study, nursing process and problem based learning has been used ((Nirmala & Shakunthala, 2011). Concept mapping is recommended as one of the effective teaching method for critical thinking (Ab Latif et al., 2016). Concept mapping technique can be used individually for learning by students or for group as a teaching method by teachers ((Bradshaw & Lowenstein, 2014). A study in Taiwan found that concept mapping helped students in accounting by integrating and clarifying the concepts and making it easy to understand (Chiou, Chei-Chang, 2008)

The purpose of this study is aimed at assessing the effectiveness of Concept mapping on the knowledge of First year Basic. B.Sc. Nursing students of selected college. The following objectives were formulated for the study.
1. To assess the effectiveness of concept mapping technique on the knowledge of Nursing students in Pune.

HYPOTHESIS:

H0: There will be no significant different in the knowledge scores after the implementation of Concept mapping.

MATERIALS AND METHODS.

A pre-experimental pre-test post-test design with quantitative approach was used. The study was conducted in the Nursing department of Tilak Maharashtra Vidyapeeth. Throughout the research process confidentiality was maintained. Students absent on the day of implementation were excluded in the study. The purpose of the research study was explained and their consent was taken. They also explained that they had the right to withdraw from the study without giving reasons if they felt so.

A total of 25 students of First year Basic. B.Sc Nursing were selected with the use of Non-Probability convenient sampling. A topic from the subject Foundation of nursing was randomly selected and which was unknown to the students. A concept map in the was prepared on the topic Nursing assessment of Cardiovascular system. The topic was taught with help of concept mapping for two hours in the FON Lab.

The baseline knowledge was assessed using a multiple-choice questionnaire which had 15 items in it. The face validity and content validity were done by experts from the field of Nursing. The knowledge was assessed on numerical values. Each right response scored '1' point whereas for a wrong response the score was '0'. The mean score was calculated. A 5- point Likert scale was used for student's opinion. It has 6 items and used as strongly agree, agree, cannot say, disagree and strongly disagree. The Process of data collection is presented in the Figure 1. In the Post-test 3 participants were not included in the study as they were absent during the post test and n=23.

The reliability of the questionnaire was done with the help of split half method and Spearman- Brown Coefficient was used. The formula used was
Spearman- Brown Coefficient = $2r/1+r$. The value for the tool to be reliable is 0.80-1.00
The coefficient of the tool was 0.90 which suggested that the tool for highly reliable.

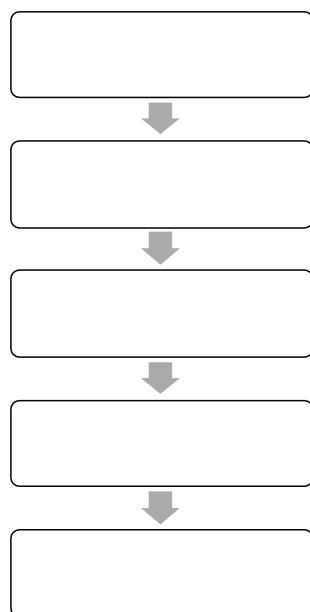


FIGURE NO 1: SCHEMATIC REPRESENTATION OF DATA COLLECTION

RESULTS

A total of 25 students studying in the first year Basic B.SC Nursing participated in the study. Majority of the students were female 68% whereas the males were 32 %. Most of the students fell in the age group of 20-21 yrs (76%).

In the Pre-test 24% scored poor between 0-5, 72% scored average between 6-10, whereas only 4% scored good i.e between 11-15. The Pre-test Knowledge score on Day 0 was 6.67 with SD 2.19.

The Post-test was conducted after 7 days. 8% scored average between 6-10 whereas 92% scored Good marks as compared to that of pre-test. The Post-test mean score was 12.5 with SD 1.33 A t-test was applied to find out the significance difference. Table No 1 shows that there was significant difference in the Pre-test and Post-test Knowledge score.

Table No 1: Comparison of Pre-test and Post-test Knowledge score

n=45

Pre-test		Post-test		SED	CI	df	p value
Mean	SD	Mean	SD				
6.6	2.19	12.5	1.33	0.53	95	45	0.0001*

As the p value is less than the table value, the Null hypothesis is rejected and thus concept mapping is effective as innovative tool in the learning.

The opinion was calculated on the basis of percentage as shown in Table no 2. The students expressed the need for the use of concept mapping as innovative tool for learning

Table No 2: Likert Scale to Assess the Students Feedback

Sr No	Items	Strongly agree/agree Frequency
1	Concept mapping made me to understand the matter	100

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2	I could connect various concepts with each other	98
3	It helped me for quick recalling	98
4	It helped me to concise the big topic effectively	68a
5	I loved the concept mapping technique	76
6	I will apply this technique for my other subject matter.	89a

a* One person did not respond.

STUDY LIMITATION

The present study is an ongoing study. The sample size is small and no control group was included for the study. More validity in the findings could be brought about by the conducting the study on larger samples.

DISCUSSION

Concept Maps have helped in teaching as well as learning the result finding are consistent with the findings of study conducted in Biochemistry among 150 students. (Sreekanth,2020). Concept mapping can really be effective in critical thinking, understanding and memorising. Through visual content. (Sandee 2005; Sarhangi et al. 2010; Youssef & Mansour 2012). Further recommendation would be along with Innovative teaching methods ,artificial intelligence can also help is learning in this era of advancement of technology. As Artificial intelligence offers more learning option and Adaption ration (Geetali,2020).

CONCLUSION:

In the Nursing education system, there has been need to shift from tradition method to innovative method and Concept maps are more easy to use and adapt in the day to day clinical learning of the students. Concept map helped in scoring well in the post-test as well learning was easy and fun.

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