Research Article

EFFECTIVENESS OF MIND MAPPING VS.LECTURE METHOD ON KNOWLEDGE REGARDING MOOD DISORDER AMONG NURSING STUDENTS IN SELECTED NURSING COLLEGES

Rashmi Singh and Lairikyengbam Sushila Devi

Bharati Vidyapeeth (Deemed to be University) College of Nursing, Pune

ARTICLE INFO	ABSTRACT
	Mind Mapping is a newer method of teaching, in which a main idea will be in the centre from which sub branches arise. Lecture method is a traditional method of teaching. The purpose of the study was to find out the effective method of teaching to improve the learning ability of nursing students. A mood disorder was the topic selected to assess the knowledge because it is an important and vast topic in mental health nursing. The aim of the study was to compare the effectiveness of mind mapping and lecture method on knowledge regarding mood disorder. **Material and Method:** A quantitative approach with quasi pre experimental, two group pre-test post-test design was used for the study. The subjects consisted of 60 nursing student selected using Non-Probability purposive sampling technique. The data was collected by administering a self-structured questionnaire. The researcher gave teaching to group one using mind mapping and group two using lecture method. A post test was conducted on the seventh day. **Result:** mean pre and post-test knowledge score for group 1 were 8.53+1.83 and 11.60+2.60 respectively, whereas in group 2 it was 7.17+1.63and 11.37+2.20 respectively. The calculated Paired 't' value if group 1 and group 2 were 7.54 And 8.76 respectively (t_{29}=1.69, p<0.05). The comparison of effectiveness between mind mapping and lecture method were done using independents'' test. The computed't' Value of lecture method was 8.76 and for mind mapping was 7.54 and the mean difference of lecture method was 4.21 which is higher than mind mapping method i.e. 3.07, which indicated that lecture method is more significant in increasing the knowledge of nursing students comparing to mind mapping. There was no any association between pre-test knowledge scores and selected demographic variable which is calculated by fisher exact test. **Conclusion**: The study findings showed that lecture method is more significant increasing the knowledge on mood disorder among nursing student comparing to mind mapping. No significant association was found between the pre-test knowledge and selected demographic variables.

INTRODUCTION

According to Rig-Veda, "Education is the source of all illumination". Learning is as ancient as the social competition. Great father of nation Gandhi once said that education is the adaptable illustration of the best in body mind and spirit of the learner. Learning can be initiated through different approaches such as Lecture, Demonstration, or combining any of the two things together; also by a novel approach of mind mapping.[1]

Education changes the entity of human being as whole. It is a learning procedure through which a man achieves knowledge and aptitude capacities to attain qualities required for the fulfilment of specific roles. Education is rendering efficient training particularly at a schools or colleges. To teach is thus giving the students a chance to delve their potential in conditions adjuvant for learning. The education framework therefore enables students to find themselves.[1]

Education and knowledge are different part. The most acknowledged standard for estimating the efficacy of teaching is the extent to which learning takes place. There exists a relationship between students' affirmation of learning distinguished inside the development and their general evaluation of the instructor and the course. Higher learning was parallel to higher teaching ratings.[3]

Nursing education is aimed to prepare the nurses to engage in the delivery of nursing care. Teachers who are usually dual qualified, being both experienced nurses and educators used to educate nursing student. Almost all countries worldwide offer nursing education courses relevant to general nursing, nursing

Corresponding author: **Rashmi Singh**
Bharati Vidyapeeth (Deemed to be University) College of Nursing Pune

of sick children and the mental health nursing.[4] Teaching learning situations various method are used for the effective teaching learning like lecture, demonstration, discussion, seminar, symposium, laboratory, projects, process recording, case method, computer assisted teaching, concept mapping and mind mapping.

Lecture method is usually followed at college or university levels. It is the most utilized and practiced approach in continuing education. It follows a focused and explanatory approach utilizing one-way correspondence providing economy of time and energy. However, lecture method has many advantages but still is not free of disadvantages; it is time consuming and provides little student's activity. It requires special skill. It is not easily analyzed and summarized by the students. If the lecture sometime poorly adapted to the perceptive ability of the students then it is likely to become a sustained dictation exercise.[7]

The concept of Mind Mapping was conceived by Tony Buzan by utilization of symbolism, shading and affiliation and instituted the expression of 'Mind Mapping'. A mind map is graphical presentation in which the significant idea emanates from a central picture and sub ideas are depicted as branches of it. It can be utilized to produce thoughts, take notes, develop concepts and ideas, and enhance memory. Mind mapping is a tool that can be used to improve learning. It is illustrative and visually appealing and help in coordinating learning, and associating with the central idea. Mind mapping as an approach present a general theme, enhance student interest, and get their ideas down rapidly. Mind mapping approach cuts through learners capability and embraces every aspect under study.[5] Farrand P led a study to evaluate the effect of care plans prepared mind map among Baccalaureate Nursing Students. And he showed that linking mind mapping and planning of care engages whole brain thinking, helps form connections thus stimulates creativity.[11]

Cain M.E concluded through his study to analyze student satisfaction after using the mind map as an approach to learning. Majority of students agreed that mind mapping helped in reconstruction and integration of learning identified with course. Hence mind mapping as a method of instruction can be utilized in the nursing education.[12] found that both lecture and mind mapping are effective in improving the knowledge of the students. As both methods has its own positive and negative points it is most important to investigate still which method will be more useful for improvement of the student's knowledge.[5] So the researcher was wishes to weigh the efficacy of mind mapping as compared to didactic learning regarding mood disorder among nursing students and felt mind mapping may be an eye-catching resource for nursing undergraduate students to help them learn, analyse, organize information and regain it whenever it is needed.

Objectives

1. To assess the level of knowledge regarding mood disorder among nursing students before administering teaching using Mind Mapping and Lecture Method.
2. To assess the level of knowledge regarding mood disorder among nursing students after administering teaching using Mind Mapping and Lecture Method.

3. To determine the effectiveness of Mind Mapping on knowledge regarding mood disorder among nursing students.
4. To determine the effectiveness of Lecture Method on knowledge regarding mood disorder among nursing students.
5. To compare the effectiveness of Mind Mapping vs Lecture Method on knowledge regarding mood disorder among nursing students.
6. To find an association between the pre-test levels of knowledge in Mind Mapping regarding mood disorder among nursing students with their selected demographic variables.
7. To find an association between the pre-test levels of knowledge in lecture method regarding mood disorder among nursing students with their selected demographic variables.

Hypothesis for Effectiveness

H_0:- There is no significant difference between the mind mapping and lecture method knowledge on mood disorder among third year BSc nursing students at 0.05 level of significance.

Hypothesis for Comparison

H_0-There is a no significant difference between Mind mapping Vs Lecture Method on knowledge regarding Mood Disorder among nursing student at 0.05 level of significance.

Hypothesis for Association

H_0:- There is no association between the mind mapping and lecture method knowledge on mood disorder among third year BSc nursing students at 0.05 level of significance.

MATERIALS AND METHODS

A quantitative approach with quasi experimental, two group pre-test post-test design was used for the study. The subjects consisted of 60 nursing student selected using Non-Probability purposive sampling technique. The data was collected by administering a 20 items self-structured questionnaire. Data gathering tools were developed in two sections i: e demographic variable -structured questionnaire knowledge on mood disorder. The validity of data collection tool content was done for relevance and accuracy to experts from various fields. The reliability was determined by test- retest method administering tool section II - structured questioners containing 20 items. Tool was administered to 10 students of third year BSc nursing from selected nursing Colleges. Retest was taken after a 24 hours. The reliability coefficient was calculated using Pearson correlation coefficient test retest method. Pearson's Reliability coefficient was r = 0.83 which is greater than 0.75 hence tool was found to be reliable. Author was obtained approval from appropriate ethical committee boards and participant. Pilot study was conducted on five students in each group at different setting than final study settings. The researcher gave teaching to group one using Mind Mapping and group two using Lecture Method in selected nursing colleges. A post test was conducted on the seventh day on structured questioners containing 20items. The data analysis was scheduled to include descriptive statistics and inferential

statistics. Descriptive statistics such as frequency and percentage were used for demographic variables. Inferential statistic i.e. paired't' test used to assess the effectiveness of the selected variable knowledge of students. For the association to assess the knowledge of students on mood disorder fisher exact test was used.

RESULTS

Section I- Finding related to socio-demographic data of participants for Lecture Method and Mind Mapping

Table 1 Frequency Distribution of the participants as per Demographic Variables.

n=30, 30

Sr.No	Demographic Variable	Lecture Method		Mind Mapping	
		Frequency	Percentage (%)	Frequency	Percentage (%)
	Age In Years				
1	2o-21 years	**30**	**100%**	**30**	**100%**
	22-23years	0	0%	0	0%
	23years and above	0	0%	0	0%
	Gender:				
2	Male	0	0%	0	0%
	Female	30	**100%**	30	**100%**
	Type of Family:				
3	Joint family	8	27%	7	24%
	Nuclear family	**22**	**73%**	**22**	**73%**
	Extended family	0	0%	1	3%

Shows that in mind mapping method all students are in the 20-21 years age group and female. Maximum 22(73%) of students belongs from nuclear family and only 7 (24%) students are from joint family.

Section: II-Finding related to effectiveness of lecture method in terms of gain in knowledge regarding Mood Disorder
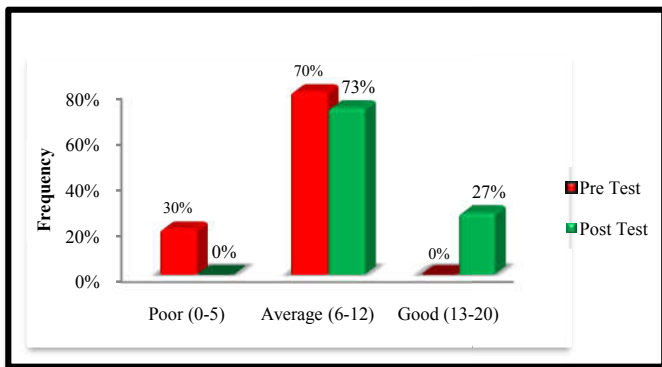

Fig 1 Bar diagram showing comparison of pre and post-test lecture method Knowledge score. n=30

Fig 1. shows that comparison of the lecture method, pre-test and post-test knowledge scores of the participants regarding mood disorder. 9 (30%)was poor, average in 21 (70%) participants, nobody of them took good score in the pre-test, whereas in post-test 8 (27%) participants, had good knowledge scores, 22 (73%) participants, had average score and no one had poor knowledge regarding Mood Disorder.

Table 2 Mean and standard deviation of knowledge score in Lecture Method

n=30

Knowledge	Mean Score	Mean %	Standard Deviation (SD)
Pre test	7.17	38.67%	1.63
Post test	11.37	61.33%	2.20
Total	18.54	100 %	3.83

Table 3 Lecture Method Mean Score, Standard Error of the Mean and Paired t Test

n=30

Knowledge score	Mean score	Standard Error of Mean	Degree of freedom	't' value	Level of Significance
Pre test	7.17	0.483	29	8.76	0.05*
Post test	11.37				

Table 2 Shows that effectiveness of lecture method is assessed by using inferential statistics; a paired t test was applied to ensure significant increase of knowledge in post-test after administration of lecture. The value of 't' at 29 degree of freedom is 8.76 which is higher than tabulated value i.e. 1.69 at significance level p<0.05 shows the lecture is highly significant in increasing knowledge of participants regarding mood disorder.

Section III-finding related to effectiveness of Mind mapping method in terms of gain in knowledge regarding mood disorder
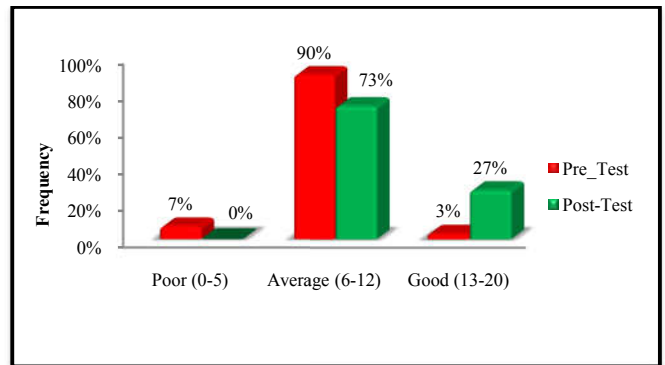

Fig 2 Bar diagram showing comparison of pre and post-test Mind Mapping Method Knowledge score n=30

Table 3 Mean and standard deviation of knowledge score in Mind Mapping Method

n=30

Knowledge	Mean Score	Mean %	Standard Deviation (S)
Pre test	8.53	42.37%	1.83
Post test	11.60	57.62%	2.06
Total	20.13	100 %	3.83

Table 3 displaying the Mean and standard deviation of test scores of mind mapping method Knowledge in pre-test mean score was 8.53±1.83 while gain in knowledge due to mind Mapping regarding mood disorder among participants was observed in post-test mean score was 11.60±2.06.

Table 3.2 Mind Mapping Method Mean Score, Standard Error of Mean and Paired T Test.

n=30

Knowledge score	Mean score	Standard Error of Mean	Degree of freedom	't' value	Level of Significance
Pre test	8.53	0.406	29	7.54	0.05*
Post test	11.60				

Table 5 showing the effectiveness of mind mapping method is assessed by using inferential statistics; a paired t test was applied to ensure significant increase of knowledge in post-test after administration of mind mapping. The value of 't' at 29 degree of freedom is 7.54 which is higher than tabulated value i.e. 1.69 at significance level $p<0.05$ shows the mind mapping is highly significant in increasing knowledge of participants regarding mood disorder.

Section IV-Finding related to the comparison of Lecture Method vs. Mind Mapping on knowledge regarding mood disorder.

Table 4 Comparison between Lecture Method and Mind Mapping Method Mean Score, Standard Error of Mean and Unpaired 't' Test

n= (30, 30)

Knowledge score	Mean score	Standard Error of Mean	Degree of freedom	't' value	Level of Significance
Lecture method Post test	11.3	0.54	58	0.40	0.05
Mind mapping Post test	11.6				

Table 4: Showing the comparison after administration of Lecture Method Vs Mind Mapping Method on Mood Disorders. The 't' table value at 58 degree of freedom is 2.00 which is higher than calculated 't' value i.e. 0.4 at 0.05 Level of significance. So we accepted the null hypothesis so, there is no difference between lecture method and mind mapping on knowledge regarding mood disorder among nursing students.

There is a no significant difference between in the mean score of lecture method and mind mapping. So it shows that both interventions are equally effective to increase the knowledge regarding mood disorder among nursing students.

Section VI- Findings related to the Association of Pre-test knowledge score of participants with selected demographic variable in Lecture Method Mind mapping method participants.

Table 5 Association of pre-test knowledge score with demographic variables of Lecture Method participants.

n=30

Demographic Variables		Knowledge Score			fisher's exact test
		Poor	Average	Good	
Type of family	Joint family	1	5	0	3.397 (p Value by fisher's exact test)
	Nuclear family	5	19	0	
	Extended family	0	0	0	

Table 6 Association of pre-test knowledge score with demographic variables of Mind Mapping method participants.

n=30

Demographic Variables		Knowledge Score			fisher's exact test
		Poor	Average	Good	
Type of Family	Joint family	0	8	0	2.884 (p Value by fisher's exact test) NS
	Nuclear family	2	17	1	
	Extended family	0	2	0	

Table 5, 6- shows the Association of pre-test knowledge score with demographic variables of Mind Mapping Method participants. Calculated p value is more than 0.05 so there is no significant association of knowledge score with selected demographic variables in Mind Mapping method and Lecture Method participants.

DISCUSSION

This study findings shows 100 % participants are belongs from age group of 20 -21 years among lecture method and mind mapping method and both group participants are female only. In the pertest of mind mapping method participants had 90% average and only 3% had good knowledge where as in the post-test 73% had average knowledge and 27% had good knowledge, there was significance difference in pertest knowledge score and post-test knowledge after mind mapping and this findings similar with study conducted by Mohamed Amir to evaluate efficacy of teaching methods at higher education level. 72% participants were showed mind aping method as the greatest teaching technique.[45]In this study there is a no significant difference between in the mean score of Lecture Method and Mind Mapping. So it shows that both interventions are equally effective to increase the knowledge regarding mood disorder among nursing students. But study conducted by N v krishnamurti conducted quantitative Study, with quasi-experimental pre-test posttest design. The post test score of mapping method was high than lecture method post test score which is calculated by using paired t test. It shows mind mapping is effective to improve knowledge than lecture method.[47]

Recommendations

1. This study can be done to prepare the discover of effectiveness of the mind mapping method only
2. This study to invention of the efficacy of the mind mapping vs. demonstration of the nursing subject.
3. This study can be conducted on different specialty students like, pharmacy, engineering, architecture students.

CONCLUSION

"Education is the versatile picture available of the best in man's body, mind and soul." Now numerous teaching-learning strategies used in education. Lecture, simulation, micro teaching, field trip, and computer assisted instruction, project method, laboratory method, socio drama, programmed instruction, socialized classroom method. Mind maps presentations used in personal, professional, every day, educational, and business, brainstorming summarizing, problem solving technique, and mnemonic technique or to concise difficult impression. Mind maps also encouraged as an

approach to cooperate in colors imagination movement. This systematic review concluded that is a need for well-designed mind mapping method need to implement in the nursing education field as teaching method.

References

1. BT Basavanthappa. Nursing education. 1st edition. New Delhi: jaypee publication: 2003.page no- 120, 133.
2. Dr. Shahida Sajjad, effective teaching methods at higher education level, Department of Special Education University of Karachi. *Pakistan*. 2011, page no-22-24.
3. Transforming and scaling up health professionals' education and training: World Health Organization guidelines-2013. ISBN 978 92 4 150650 2: Page no-54-59.
4. Blazer DG. Depression in late life: review and commentary. *Journal* -2003; 58(3): page no-249-265.
5. Buzan bites: mind mapping: kick start your creativity and transform your life paperback-21 July 2006
6. Farrand, P, Husain F, Hennessy E. The efficacy of mind map study technique. Medical education 36 (5) 2002: 426-31.
7. Cain M E. Using mind maps to raise standards in literacy, improve confidence and encourage positive attitudes towards learning. new church community, Warrington; 2002
8. Rawezh Ibrahim. Traditional teaching methods: *Nursing Standard.* ISSN 2222-1735 Vol.7, No.12, 2016.
9. Abraham said. To assess the impact of mind mapping technique in information retrieval among medical college student: *Nursing education*.2015; 25 (2):55-60.

****