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EFFECTIVENESS OF TEAM BASED LEARNING (TBL) VERSUS LECTURE METHOD ON LEVEL OF KNOWLEDGE REGARDING COMMUNITY HEALTH NURSING SUBJECT AMONG UNDER GRADUATE STUDENTS OF SELECTED NURSING COLLEGES IN WEST BENGAL.

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Abstract: Introduction: Team Based Learning is one of the structured forms of small group learning which emphasizes out of class room self-preparation and application of knowledge in classroom activities. This method of learning facilitates the team work, communication skill, responsibility towards team success. Objective: The study aimed to assess and compare the effect of nursing students level knowledge on community health nursing subject taught by Team Based Learning and Lecture method. Methods: A Quantitative research approach with post-test only research design was used. All 50 students B.Sc Nursing second year students were included in the study. A structured questionnaire was used to assess the knowledge. Results: The finding reflects that the mean knowledge score of nursing students in the Team Based Learning group was 24.20 and in lecture method group was 19.35. The obtained mean difference between Team based learning group and lecture group was found to be statistically significant as evident from‘t’=2.69 at 0.05 level of significance. The study findings also revealed that in the Team Based learning group, 16% of nursing students had acquired poor knowledge, 68% had acquired average knowledge and 16% had acquired good knowledge, whereas in the lecture group, 40% of students had acquired poor knowledge, 52% had acquired average knowledge and 8% had acquired good knowledge. Conclusion: the study revealed that the mean knowledge score after post-test of nursing students in the Team Based group was higher than mean knowledge score after post-test of that the mean knowledge score after post-test of nursing students in the Lecture group; Team Based learning method was more effective than lecture method.

Index Terms: **Knowledge, Team Based Learning, Lecture method, Community Health Nursing.**

I. INTRODUCTION

The expeditious advancement in Science and technology demands Nursing curriculum or system to become more innovative, combination of traditional method of teaching with novel strategies is highly appreciable and acceptable. Team Based Learning is one of the structured forms of small group learning which emphasizes out of class room self-preparation and application of knowledge in classroom activities. This method of learning facilitates the team work, communication skill, responsibility towards team success.

The popularity of Team based learning is widely increased because it employs active learning to promote self-directed learning and enhances student adaptability in problem solving situation. Team based Learning is now used in a variety of academic fields, including Business administration, Medicine, Pharmacy, Nursing etc.,. To keep up with the fast evolving Medical technology and science, Nursing Education must become more innovative, combining old teaching strategies with novel methodologies.1

Nursing Education must keep pace with the rapidly advancing medical care to support Nurses abilities in in critical thinking and problem solving. It will help nursing professionals to respond effectively to complicated, diverse and ever changing medical situations.2

Ulfa et.al. (2021) conducted a cluster randomized controlled trial to compare the effects of TBL and LBL. Random allocation was conducted using a simple random sampling method (i.e., coin flipping). There was 1 cluster in the intervention group (n=62 students) and 1 cluster in the control group (n=53 students). The students in the intervention group participated in a TBL class (90 min) three times, whereas the students in the control group attended an LBL class on postpartum haemorrhage topics. Result revealed that mean clinical reasoning on postpartum haemorrhage scores were significantly higher in the TBL students than in the LBL students at post-test ($p<.001$; Cohen's $d=1.41$) and 2 weeks post-test ($p<.001$; Cohen's $d=1.50$). The CES showed a significantly higher in the intervention group than in the control group.

Branney et.al. (2018) conducted a mixed method observational study to evaluate the use of team-based learning in the teaching of applied pathophysiology to undergraduate student nurses. Applied pathophysiology module circulatory shock was taught using Team-based Learning while all remaining topics were taught using traditional lectures. After the Team-based Learning intervention, the students were invited to complete the Team-based Learning Student Assessment Instrument, which measures accountability, preference and satisfaction with Team-based Learning. The exam scores on the question related to Team-based Learning-taught material were comparable to those related to lecture-taught material

Objective:

To compare the post-test knowledge score of nursing students in Team Based learning method and lecture method group.

Hypothesis:

The knowledge scores in the team Based learning group will be significantly higher than the scores of the lecture group.

Methods:

A Quantitative research approach was used for the study. A Post-test only design was used. Hundred B.Sc Nursing students from a Institute of Nursing, West Bengal were chosen as the study participant using the total enumerative sampling technique. The students were randomly allocated to Team Based Learning group and Lecture method group using lottery method by the researcher. Both the groups were taught the same topic by the researcher. The TBL group was further divided into sub-group (5students per group). TBL was conducted for 4 hour in 4 sessions. This was followed by a brief summary and discussion led by the researcher to highlight the integrated approach in case.

The second group was taught the same topics by lecture method as 4 sessions. At the end of TBL and Lecture method of learning both the groups were evaluated by multiple choice questions regarding community Health Nursing. The post-test was administered after 7 days of Intervention.

The tool was organized into two sections:

- Section-A: Participant Information sheet-This section comprised questions related to demographic characteristics such as age, gender, previous academic grades, religion, family structure and residence.
- Section-B: A structured Knowledge questionnaire was prepared by the researcher to evaluate the nursing students knowledge about community Health Nursing subject. This section consisted of 45 multiple choice questions regarding Community Health Nursing Subject.

Each correct answer was given a score of 1 and unanswered or wrong answer was given a score of 0. The highest score was 40 and the lowest score was 0. A score of 0-15 was interpreted as poor knowledge, while16-30 was considered as average and a score of 31-45 was considered as good knowledge. The reliability of the structured questionnaire was calculated as r=0.91, which was good and reliable. The tool was validated for its content by subject experts.

Table 1: Distribution of Nursing students based on demographic Variables

Sample Characteristics		Team Based Learning (Group-1) N=25 Frequency (%)	Lecture Method (Group-2) N=25 Frequency (%)	X^2	P
Age	18-20	9(36)	7(28)	-	0.29
	21 above	16(24)	18(72)		
Previous academic grade (%)	<60	3(12)	2(8)	-	0.32
	61-70	13(52)	15(60)		
	>70	9 (36)	8(32)		
Family Structure	Nuclear	16(44)	16(64)	-	0.43
	Joint	7(28)	9(36)		
	Extended	2(8)	0		
Residence	Urban	12(48)	10(40)	0.41	0.52
	Rural	13(52)	15(60)		

Table 2: Distribution of Nursing students based on their level of Knowledge in Team based Learning method and lecture method

Level of Knowledge	Team Based Learning (Group-1) Frequency %	Lecture Group (Group-2) Frequency %
Poor (0-15)	4(160	10(40)
Average (16-30)	17(68)	13(52)
Good (31-45)	4(16)	2(8)

Table3: Comparison of students' Knowledge in Team Based Learning group and Lecture method group :

Group	Range of Score	Mean+/-SD	Median	Mean Difference	't' Value	P
TBL	13-38	24.28+/-6.34	24	4.92	2.71	0.009*
Lecture Group	12-34	19.36+/-6.49	19			

Ethical Consideration:
Ethical clearance received from IQ City Medical College& Hospital, West Bengal. Permission for data collection was received from concerned Institution Heads. The students were asked to sign an informed consent form, students' information and their responses were kept confidential.

Results:
The data in Table1 reveal that both Team Based learning group and Lecture group were compared and were found to be homogenous with respect to age, grnder, previous academic achievements, type of family etc., as revealed by statistical test.
The data in the table 2 reveals that in the Team Based Learning group, 4(16%) nursing students had poor knowledge, 17(68%) had average knowledge and 4 (16%) nursing students acquired good knowledge, whereas in the lecture method group, 10(40%) nursing students had poor knowledge, 13(52%) nursing students had average knowledge and 2(8%) nursing students had acquired good knowledge.
The data in Table 3 reveal that the mean knowledge score in Team Based Learning was24.28 and standard deviation is 6.34, and in the lecture group mean score was 19.36, SD=6.49, with a mean difference of 4.92. Therefore, the students in the Team based learning group had better knowledge than the students of lecture group. As shown by the t value of 2.71 for df(48) at 0.05 level, the obtained mean difference between the TBL and lecture group was determined to be statistically significant.

Discussion
The findings of the present study revealed that the mean knowledge score of the TBL group(24.28) was higher than the mean knowledge score of lecture group(19.36),and the mean difference was stastically significant as evident fromt=2.71 for df(48) at 0.05 level.

Limitation:
The sample size was less and this restricts the generalization of the findings to a larger population.

Conclusion:
It is concluded that Team Based Learning method was more effective than lecture method among nursing students. It has shown better knowledge acquisition as well as critical thinking skills, it can be chosen as an effective teaching-learning method in Nursing.

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Conflict of Interest
There are no conflicts of interest

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