



A Study of Problem-Based Learning (PBL) - Student Response System in M.B.B.S Anatomy Course

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ABSTRACT

Background- *Problem-based learning (PBL) visualizes students to study material by applying processes of reasoning rather than by rote memorization of facts. To this purpose I have evaluated PBL compared to traditional teaching in gross anatomy in first year M.B.B.S by comparing the examination performances and student's responses to the questionnaires.*

Methods- *A total of 100 first year M.B.B.S students at Telangana area Medical College during the period of October 2009 to October 2010 were trained gross anatomy with conventional teaching for one semester and PBL for the other semester. Assessment scores from together methods and evaluation done by completing the student feedback questionnaires.*

Results- *In the study 23 students were male and 77 were female students respectively. The mean age of the students was 21 years. Descriptive statistics were used to analysis of students' responses, collected through feedback questionnaire. 92% students strongly agreed PBL is useful method of tool of learning comparatively traditional teaching method, 7.4% disagree with this study and remaining 4% were neutral in their response.*

Conclusion- *The PBL method resulted in improved assessment scores than traditional teaching for the same students and believed that this method augmented their problem solving abilities.*

Keywords: *anatomy, methods, instruction, medical student*

INTRODUCTION

There are a mixture of challenges faced by the Medical teachers like deviation in learners, variation in their perception and understanding, disparity in the content taught and differences across education setup. ⁽¹⁾ The best way to assess and improve the teaching methodology is through the students' feedback. Problem-based learning

(PBL) was one such important teaching methodology was first developed by Howard Barrows. ⁽²⁾ PBL is an educational approach that challenges students to 'learn to learn' and work co-operatively in groups to seek solutions ⁽³⁾ In this procedure, small groups of students are accessible with contextual situations and asked to define the problem, decide what skills and study

resources are required to investigate the problem and then create likely solutions. Students obtain information skills and understanding through a staged series of problems presented in succession. ⁽⁴⁾ Many studies and meta-analyses have found that PBL results in performances on clinical examinations that are identical to if not superior performances following traditional teaching methods. ⁽⁵⁻⁸⁾ At the same time, tutors play the most important role in the success of students exposed to PBL ⁽⁹⁾ Gross anatomy is a vital basic science in first M.B.B.S subjects, deficiency in the subject student may sense inadequately prepared for clinical courses thus; analytic the preeminent teaching method warrants investigation. To this purpose I evaluated PBL compared to conventional teaching in gross anatomy of first M.B.B.S students by student's responses to the preformed response questionnaire.

METHODS

The study sample of 100 students of first year medical students at Medi Citi Institute of Medical Sciences, Medchal, Ranga Reddy District, during the period of October 2009 to October 2010 were taught gross anatomy with conventional teaching

for one semester and PBL for another semester. During the first three semesters of education, students take their basic science courses which include gross anatomy. A written multidisciplinary anatomical problem for the problem-based procedure was used. IEC has approved the study protocol. PBL methods were used for the first and second semester, after taking an examination; student's satisfaction was evaluated by another student response questionnaire. Comparison of the two methods was then performed. The paper based Questionnaire was composed of 10 descriptive questions of agree, neutral and disagree. Praveen et al study ⁽¹⁰⁾ students' responses questionnaire was used in this study.

RESULTS

In the study 23 were boy students and 77 were girl students respectively. The mean age of the students was 21 years. Descriptive statistics were used to analysis of students' responses, collected through feedback questionnaire. 92% students strongly agreed PBL is useful method of tool of learning comparatively traditional teaching method, 7.4% disagree with this study and remaining 4% were neutral in their response.

Student's Perception towards PBL (n=100)				
S.No	Question	Agreed	Neutral	Disagreed
1	Method used in teaching case based learning in anatomy was useful	82	08	10
2	Helped in improving understanding further	88	03	09
3	Process encouraged student responsibility for the learning objectives	88	04	08
4	Brought in more interaction	89	03	08
5	Improve problem solving ability	91	02	07
6	Facilitators were helpful	90	05	05
7	Presentations helped to learn better	93	0	07
8	Opportunity to express	78	13	09
9	Will help to perform better in University exam	95	0	05
10	Will help to perform better in later days of clinical course	92	02	06
	Total Percentage	88.6	4.0	7.4

DISCUSSION

The study reveals that the PBL system helps developing student skills particularly problem solving skills and help sharpening analytic skills.

Hinduja et al ⁽¹¹⁾ established in his study that students with traditional teaching method system will have a better level of anatomical knowledge than those trained with an integrated type of

course. However, Nandi et al. ⁽¹²⁾ stated that a mixture of both conventional teaching and PBL may offer the most efficient training for medical students. Musal et al ⁽¹³⁾ educated that the increase in PBL experience of students helps in development of their conversation skills. According to our results, the mean score on tests which had been taught to students traditionally and via PBL demonstrate that the PBL method was probably more effective in helping students to learn the material and gain higher scores.

CONCLUSION

Our study showed that first year medical students believed that PBL was effective and more beneficial than a traditional teaching regimen. The PBL method resulted in improved assessment scores than traditional teaching for the same students and believed that this method augmented their problem solving abilities.

CONFLICT OF INTEREST: NONE

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