



IMPACT OF "GROUP DISCUSSION" AS A TEACHING-LEARNING METHOD ON PERFORMANCE OF POOR PERFORMERS IN THE SUBJECT OF ANATOMY

Anatomy

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ABSTRACT

A group discussion (GD) facilitated by a teacher should be learner centred. In this pilot project we provide scope for the poor performing students of Anatomy to improve before summative assessment by involving 12 least scorer students of part completion test of upper limb with 50% attendance and below 50% marks. We assess the improvement of knowledge, performance, communication skills, and development of self confidence among the participants. During GD, three sub groups of 4 students with horseshoe arrangement were formed. A post test & a separate test for assessing the increase in skills were held on the next day of each GD session, to assess the improvement. Statistical analysis was conducted using one way ANOVA and paired t-test. There is a significant difference ($p < 0.05$) between mean marks scored in Upper limb main base line test and the test after GD1 and GD 2 and no difference after GD3 which indicates impact of the GD was maximum in the first two GDs with improved level of performance and skills to a significant level in under performers in the subject of Anatomy.

KEYWORDS

Anatomy, Group discussion, Small groups, Medical education

INTRODUCTION

In a group discussion, a typical view of a 'Small group' is around eight to twelve learners facilitated by a teacher which should be learner centred¹. The teacher has a role in ensuring that each session forms part of the whole curriculum by creating opportunities by various types of formative assessments which provides a scope for the student to improve².

For improving medical education, Integrated teaching and Problem Based Learning (PBL) has recommended strongly by Medical Council of India, New Delhi in its Vision 2015³. Majority of the teachers are knowing this fact but they find it difficult to manage because of poor student teacher ratio and time limitation of one year for MBBS I year making it even more difficult for the students to cover and grasp the subject and for teachers to complete the syllabus.

A study has been carried out in Punjab to know about the medical students attitude and perception towards basic science subjects in which 50% of the students considered Anatomy as the most important basic science subject and 90.6% felt that PBL would have helped in better understanding of the subject⁴.

Thus in this pilot project taken up in the Department of Anatomy, MGM Medical College Indore, the group discussion followed by test is a step to provide scope for the poor performer student to improve before summative assessment. The objectives of this study was to assess the improvement of knowledge, performance, communication skills, and development of self confidence among the participants.

MATERIAL AND METHODOLOGY

The study was conducted between December 2014 to February 2015. 12 least scorer students of part completion test (PCT) of upper limb from 2nd and 3rd counseling of PMT 2014 with 50% attendance and marks below 50% were selected with their prior consent. After identification of their problem areas, group discussions (GD) were scheduled. During GD, three sub groups with horseshoe arrangement were formed comprising of four students under it. Total 4 GD sessions were conducted. Conduction of GD also included bone marking and bone articulation under observation of facilitator and the invited external faculty. Effective questioning was done to clarify ideas of the participants (Figure 1-4). A post test & a separate test for assessing the increase in skills were held on the next day of each GD session, to assess the improvement. Feed Back Forms from student were obtained at different stages to know their views and level of satisfaction.

The sample was described by using mean \pm SD for quantitative variables. Statistical analysis was conducted using one way analysis of variance (ANOVA) and applying paired t-test. A level of statistical significance was established at a value of $p < 0.05$. The analysis was

performed using Statistical Package for Social Sciences (SPSS) version 16.0 program for Windows.



Figure 1: Students during the process of Group discussion



Figure 2: Students during Writing a post-test



Figure 3: Students during Assessment of skill

OBSERVATIONS AND RESULTS

Impact assessment has been done and described in Figure 4, with overall improved examination performance and better overall performance of the students. There is a significant difference between the mean marks scored in the Upper limb main base line test and the test after GD1 and GD 2 as shown by value of $p < 0.05$ (Table 1 and Graph 1), there is actually no difference in the T-value & p-value after GD3 which indicates impact of the GD was maximum in the first two group discussions.

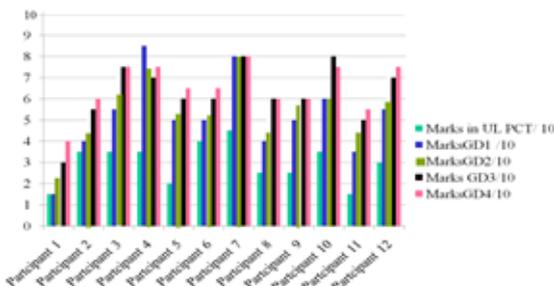


Figure 4: Impact assessment

TABLE – 1 Comparison of marks obtained in PCT of Upper Limb and after Group Discussion

Factors	Mean score	Standard Deviation	T- value	p-value
PCT UL	3.08	0.996	-5.503	0.000
Post T. GD1	5.17	1.697		
Post T. GD1	5.17	1.697	-2.244	0.046
Post T. GD 2	5.75	1.658		
Post T. GD 2	5.75	1.658	0.804	0.438
Post T. GD 3	5.88	1.379		
Post T. GD 4	5.75	5.92	-1.483	
Post T. GD 5	1.357	1.311	0.166	

Post T.= Post Test



Graph 1: Comparison of Individual marks in PCT with GD post test

DISCUSSION

It is evidence that the quality of interaction, motivations and beliefs among the group members helps in effective learning in groups^{5,6}. Small-group discussion formats helps in independent thinking and problem-solving skills in students. Prior research has demonstrated greater satisfaction levels when students participated actively in the learning process⁷. Therefore, in this study we assessed the improvement of knowledge, performance, communication skills, and development of self confidence among the participants.

In our study the improvement of knowledge was measured with a multiple-choice and open-ended question test as in Arias A et al⁸ at the end of each GD session. Data scored were obtained for 12 students, with a 100% response rate. For assessing performance and development of self confidence among the participants, conduction of GD also included bone marking and bone articulation under observation of facilitator and external faculty. Effective questioning was done to clarify ideas of the participants. For assessing skills a post test & a separate test were held on the next day to assess the

improvement and charted on Graph 1. There is a significant difference between the mean marks scored in the main base line test and the test after GD1 and GD 2 as shown by value of $p < 0.05$.

The results in Arias A et al⁸ study on two groups showed that the skill performance of students in small-group discussion groups scored significantly higher than those in the lecture groups. Improved manual skill acquisition was significantly related to active student participation. There were no significant differences found in the acquisition of knowledge between the two groups on the written test as the format of the session does not seem to have had a direct influence on acquired knowledge.

Homes J et al⁹ done a study to assess the effects of making a large class seem small on the students' collaborative learning processes and concluded that better group learning processes can be achieved in large medical schools by making large classes seem small.

A questionnaire based study was designed by Gade and Chari¹⁰, involving physiology teachers in which 70% of the teachers were not satisfy with the students' performance and indicated that this is because of many flaws in the present teaching system. Teaching is purely teacher centred one way communication in which students are passive learners and are not actively involved in the teaching learning process. They concluded that revision of the syllabus is the need of the hour but the same syllabus can be made interesting & motivating for the learners by applying new strategies.

CONCLUSIONS

Group discussion is certainly helpful in improving the level of performance and skills (both spoken & activity) to a significant level in under performers in the subject of Anatomy.

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