

# Small Group Methods In Medical Teaching

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## Medical Education

Small group discussion followed by presentation as a revision exercise at the end of a teaching module in biochemistry

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### ABSTRACT

**Background:** We evaluated the effect of student-dominated small group discussion followed by faculty-moderated presentation as a revision exercise after completion of a teaching module in biochemistry. We assessed the understanding of graduate medical students on the topic and the gain in retention of information, if any, after 15 days.

**Methods:** Small group discussions involving 11-12 students in each group were conducted on 12 application-oriented problems in 'amino acid metabolism'. A group leader among the students helped to conduct the discussions. While two-thirds of the problems were taken up after the discussion during faculty- or student-moderated interactive presentations, the remaining were not. The effects on low-, medium- and high achievers were evaluated by a pre-test and post-test with multiple choice questions immediately after the session. A subjective feedback was also obtained. To test short term memory, a post-test with the same multiple choice questions was conducted after 15 days.

**Results:** The exercise was effective and equally beneficial for low-, medium- and high achievers. The gain was maximum when faculty moderated the presentation session. The students' retention of their gain after 15 days was complete. All the students wanted more such sessions in future.

**Conclusion:** Student-dominated small group discussion followed by faculty-moderated presentation is an effective, revision exercise for undergraduate medical students.

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### INTRODUCTION

Medical students are taught biochemistry mostly in the form of didactic lectures to convey the basic biochemical concepts and their clinical relevance. The Medical Council of India (MCI) recommends the teaching of biochemistry in the first 12 months of the undergraduate course. About a decade ago, the duration of the course was 18 months. Several topics such as chemistry and metabolism of carbohydrates, lipids and proteins, enzymes and

molecular biology are taught in tandem. Although the MCI has reduced the content of the biochemistry curriculum, much more than the prescribed areas is covered within the same duration. There is little opportunity for students to clarify their doubts and reinforce the concepts they learn during the didactic lectures. As a result, students find it difficult to relate clinical problems with biochemical concepts. Moreover, students find it difficult to listen to their teachers continuously for many hours without any active participation. Their inhibitions and other difficulties in approaching their teachers add to their problems. Different methods for revision, such as tutorials and teacher-centred controlled discussions, have been tried in the past with variable results. The MCI regulations on graduate medical education, 1997 insist that every attempt should be made to encourage students to participate in group discussions and seminars to enable them to develop personality, character, expression and other faculties which are necessary for a medical graduate to function either in solo practice or as a team leader when he begins his independent career.<sup>1</sup>

'Amino acid metabolism' is one of the topics in medical biochemistry where the branching biochemical pathways are too many for the students to remember. We found it difficult to hold the attention of students during lectures to convey the correlation of such branching pathways with associated inborn errors of metabolism. We postulated that revision of the topic in the form of a group discussion might help the students to understand the topic better.

There are few publications on the use of group discussion in graduate medical education,<sup>2</sup> especially as a revision exercise. Group discussions are at the centre of medical education because active learning is more efficient and helps in long term retention.<sup>3</sup> We assessed the effect of small group discussion followed by presentation as a revision exercise on the understanding of 'amino acid metabolism' and in generating interest among the undergraduate medical students at our institute. We also evaluated whether moderation of the presentation after the group discussion by the faculty or students made any difference and compared the benefit of this exercise to high-, medium- and low achievers. The retention by the students after 15 days was also estimated.

### METHODS

#### Small group discussion

For the discussion, twelve application-oriented problems, most of them with clinical relevance, were prepared from the topic 'amino acid metabolism'. Based on the problems, 12 multiple-choice questions (MCQs, one best response type) were set for the pre-

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Small group methods in medical teaching. Henry Walton. World Federation for Medical Education. 1  
INTRODUCTION. A teaching skill essential for all medical. Med Educ. Nov;31(6) Small group methods in medical teaching. Walton H(1). Author information: (1)World Federation for Medical Education. Different methods facilitate different kinds of student engagement and The name of the small group teaching session will provide some clarity on the overall .Senior Lecturer in Community Medicine at the Centre for Medical Education Research and small-group methods in medical education. The aim of groups. Clinical Review ABC of learning and teaching in medicine Techniques for effective facilitation in group discussion. Ensure that. Medical Teacher, Vol. 18, No. used teaching method in the health professions ( Barrows, . small-group teaching can become more effective and more. Schedule small group reflection for learning sessions at regular intervals in each course. Arson, L. Twelve tips for teaching reflection at all levels of medical. Effective small group teaching: Social and institutional challenges. Social challenges. Institutional challenges. Page 3. 3. Section III: The Oxbridge tutorial: myth and method. 22 .. Particularly popular within medical education. many topics than their students or trainees, but medical science is changing so .. See 'Facilitating learning: small group teaching methods' in Explore this topic, .most difficult and highly skilled teaching techniques and should be planned Keywords: Medical education, Small group tutorials, Leadership. Discussed some of the strengths of and difficulties with small group teaching facilitation issues and methods for small group teaching, with reference to your. Our results further revealed that small group teaching and learning method was extremely possible for discussion (81%), clarification of doubts. o small group teaching methods and discussion techniques o seminars and tutorials and postgraduate medical education were introduced, medical education. Objective: The introduction of innovative teaching formats and methods in medical education requires a specific didactic training for teachers to. Although medical colleges in Iraq started recently to increasingly use small group and teaching facilities, using more interactive teaching methods and better Faculty Member Student Centered Learning Teaching Facility Small Group. Small group teaching has become more popular as a means of encouraging The following methods can be adapted for either large or small group teaching. Methods Six focus groups were held with 46 Year 1 and 2 medical students to assess their perceptions of effective small group teaching in the. Managing Small Group Learning (Article) Methods for Teaching Medicine explores not only the traditional methods of. One of the purposes of medical education is to ensure that study, small group discussion as a teaching method was compared with the. The important small group methods popular in medical schools are tutorials, seminar, problem based learning, bed side and ward based clinical teaching. 1 Centre for Medical Sciences Education, Faculty of Medical Sciences, The Conclusions: PBL is an effective small group teaching method for.

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