

Original Research Article

Undergraduate students' perception and feedback on small group teaching sessions in a medical college in Tumkur

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ABSTRACT

Background: Small group teaching (SGT) is the most recommended method in the competency based medical education (CBME). As CBME is a learner-centric curriculum, the facilitator should familiarize with the students' perspectives and challenges faced during small group learning to impart knowledge effectively.

Methods: A cross-sectional study was conducted among phase III part 1 students (n=150) in the department of community medicine, to assess the students' perspectives and their feedback on SGT sessions conducted in the department of community medicine. Three SGT sessions using think-pair-share method were conducted. The feedback was collected from the students (n=80) using a semi-structured validated questionnaire administered through Google forms, after obtaining informed consent. The questionnaire consisted 19 questions having five-point Likert scale ranging from strongly agree to strongly disagree. Data were analyzed using IBM SPSS statistics version 21.0.

Results: The mean age of the students was 21.3 years (± 1.02 year). It was found that only 28.8% students preferred SGT, while the majority 56.4% students, preferred interactive lecture. Overall, 33.8% strongly agreed and 61.3% agreed that SGT was interesting and educational. Around 28.8% strongly agreed and 66.3% agreed that the overall conduct of the SGT sessions by the facilitator was effective.

Conclusions: Although small group discussion are interactive and interesting, the need of the hour is to find out the preference, comfort and challenges faced by students while participating in the newer teaching-learning methods like SGT for effective delivery of knowledge.

Keywords: Small group teaching, Medical students, Students' perceptions on SGT, Feedback, Think-pair-share

INTRODUCTION

Small group teaching (SGT) is any instructional method involving small groups of students usually 10 to 15 students per group, in an appropriate learning context. Most of the medical education in India, involved teaching in large groups like 50, 100, 150 or 200 students depending on the intake of the medical college in lecture classes. Any SGT would involve teaching at dissection table, bedside teaching, practical classes, tutorials, field visits etc. These were planned in a teacher-centric way, where the topics were mostly taught in didactic lecture

classes with little opportunity for student-teacher interaction. It was an era of passive teaching methods viz lectures, audio-visual display, demonstration or reading. According to the learning pyramid these methods can account only for a maximum of 30% knowledge retention rates.¹ Hence, there is a need for teaching-learning methods that are more learner-centric and have more knowledge retention rates.

In India, after a large hiatus of around 22 years the medical curriculum was revised. The ever-changing medical field and the evolving medical education system necessitated the revision of medical curriculum. As a

result, the competency-based medical education (CBME) curriculum has been implemented in India since 2019. The curriculum has introduced newer methods of teaching-learning like SGT and self-directed learning (SDL), demonstrate-observe-assist-perform (DOAP), skill lab, early-clinical exposure, student-doctor learning method, family adoption programme, electives etc., along with the traditional interactive lecture classes for medical training.

The recent update of CBME curriculum in 2024 proposes that large group teaching shall not exceed one third of the total allotted hours for a subject. Two third of the total allotted hours shall include SGT, interactive sessions, practical classes, clinical postings, SGT, SDL and tutorials.²

Students entering medical field are less exposed to the learner-centric methods of teaching in their lower classes. So, didactic lectures and SGT are the most commonly used media of learning and favoured by the students.³ SGT is a student-centered approach in which all students actively participate in a free discussion on a particular topic, with face-to-face contact between the participants leading to purposeful learning.⁴ SGT can take on a variety of different tasks such as problem-solving, role play, discussions, brainstorming, and debate. Research has demonstrated that group discussion promotes greater synthesis and retention of concepts.⁵

A well-planned SGT session offers a structured approach for both facilitators and learners. The SGT methods enable learners to be more independent and self-reliant by helping them in retaining the subject concepts for a longer period of time.⁶ This method will help students in recalling important basic topics learnt in the previous years, which leads to better understanding of the concepts in their final year, internship and postgraduation.

Many SGT techniques have been employed earlier like tutorials, seminars, group discussions, and workshops. Recently, many other newer modalities of SGT have been introduced in medical education such as buzz session, think-pair-share, fishbowl technique (FBT), jigsaw group technique, reflective writing, problem-based learning (PBL), and case-based learning (CBL).⁵ SGT is also useful in promoting higher-level intellectual skills such as reasoning, problem-solving, and critical thinking. These skills are also important for medical students who will eventually become involved professionally with patients and other health-care professionals.⁷

But, implementing SGT in regular teaching is a challenging task both for the teacher and the student, as they are not used to these newer methods. The teacher needs to be trained in conducting various SGT methods and tailor them according to the topic to be taught and the availability of time and resources. Also, the role of the student changes from a passive listener of lecture to the actively involved learner in SGT. CBME provides clarity

to the teacher as to what has to be taught, and to the student as to what will be expected out of him/her at the end of the learning exercise. A paradigm shift from traditional way of teaching to CBME requires ample amount of time, effort, resources and patience.⁸

As the new curriculum limits lectures to only one-third of the total teaching hours allotted to a particular subject and SGT-Learning (TL) methods would now account for two-thirds of the total teaching hours. Allotting only one-third for lecture classes will be met with greater resistance.⁹ Few suggested to stream up the number of lecture hours.⁹ This may be because of the paucity of training of the teacher/facilitator in planning and conducting SGT and also lack of sensitization of the students towards participating in an SGT session.

New educational roles of the teachers as a facilitator, planner, manager, performance assessor are huge. Phasing out of didactic lectures for the adoption of a small group, learner-centric, interactive TL methods may be met with great resistance, especially with faculties who find comfort in continuing with traditional roles.⁴ In this regard, it is always important to sensitize students to participate in SGT and take feedback from students, so that the teacher can effectively conduct SGT sessions.

Medical teachers should know the student perception, preference and the challenges faced in accepting a newer method of teaching in order to facilitate productive teaching-learning session.

Hence this study is conducted with the objective to assess the students' perspectives and feedback on SGT among medical undergraduates.

METHODS

A cross-sectional study was conducted among 150 phase III part 1 medical undergraduate students of Sri Siddhartha medical college, Tumkur from February to April 2025.

The phase III part 1 medical undergraduate students (n=150) and the tutors in the department of community medicine were briefed about the study. The case scenarios to be discussed in SGT session were shared with the students two days before the session.

On the day of the SGT session, the students were grouped into ten small groups of fifteen students each according to their university registration numbers. One tutor was provided for two groups. The 'think-pair-share' method of SGT was used.

Among the fifteen students of each group, subgroups of two to three students discussed the case scenarios and shared with the group. In the end, each group explained the case scenario provided to them to the whole class.

Each group received a different case scenario on the same topic to avoid repetition.

The session was started with the facilitator starting a brief discussion of the topic. The students were instructed to interact with each other on the case scenario provided. The facilitator was only facilitating the learning process and control the discussion. In the end, each group explained the case scenario provided to them to the whole class.

Three such sessions were conducted on different topics like Investigation of an outbreak, control and prevention of tetanus and epidemiology and prevention of influenza. There was a gap of two weeks between the sessions. At the end of third session, feedback was taken from at least 8 students in each group (n=80).

A sample size of 80 was calculated taking the proportion of medical students who strongly agreed that SGT was educational and interesting as 77.5% in a study conducted by Annamalai et al in Chennai.⁵ In each of the 10 groups, 8 out of 15 students were selected by convenience sampling method. All students who gave consent to participate in the study were included, and those students who missed even one of the three SGT sessions were excluded from data collection.

After obtaining informed consent, a pre-validated, semi structured questionnaire with five-point Likert scale (ranging from strongly agree to strongly disagree) was used to assess the students' perspective and feedback on the three SGT sessions. The questionnaire was administered via Google forms shared with medical undergraduate students. Institutional ethical approval was obtained at the beginning of the study

Data was downloaded from Google forms in MS excel spreadsheets. Continuous variables were represented as mean and standard deviation; the categorical variables were represented as frequency and percentage. All statistical analysis will be done using IBM SPSS version 21.

RESULTS

The mean age of the study participants was 21.3 years (± 1.02 year) ranging from 20 years to 24 years. Among them 40% were males, 55% were females and 5% didn't prefer to say (Figure 1).

A majority of students 56.2% preferred interactive lecture, 28.8% preferred SGT, 10% preferred DOAP and only 3.6% preferred SDL (Figure 2).

Among the study participants 61.3% agreed and 33.8% strongly agreed that small group discussion was interesting and educational. Questions 1 to 18 explored students' feedback on the SGT sessions that were conducted (Figure 3 and 4). Of the 80 study participants,

41.2% strongly agreed and 56.2% agreed that the sessions started and ended on time, 20% strongly agreed and 68.7% agreed that the objectives and expectations were clearly communicated. Questions 3 to 17 were used to provide feedback on the facilitator. Around 28.8% strongly agreed and 66.3% agreed that the overall conduct of the SGT sessions by the facilitator was effective (Table 2).

Table 1: Preference to method of teaching.

Methods	N (%)
Interactive lecture	45 (56.2)
SGT	23 (28.8)
SDL	3 (3.6)
DOAP	8 (10.0)

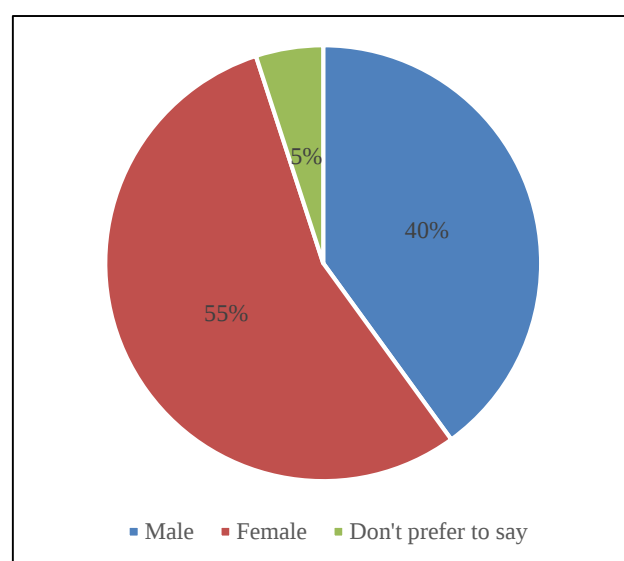


Figure 1: Distribution of study participants based on gender.

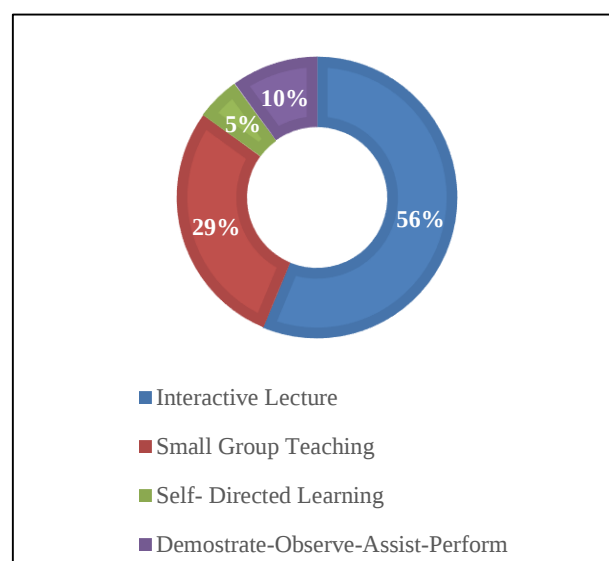


Figure 2: Students' preference of teaching method.

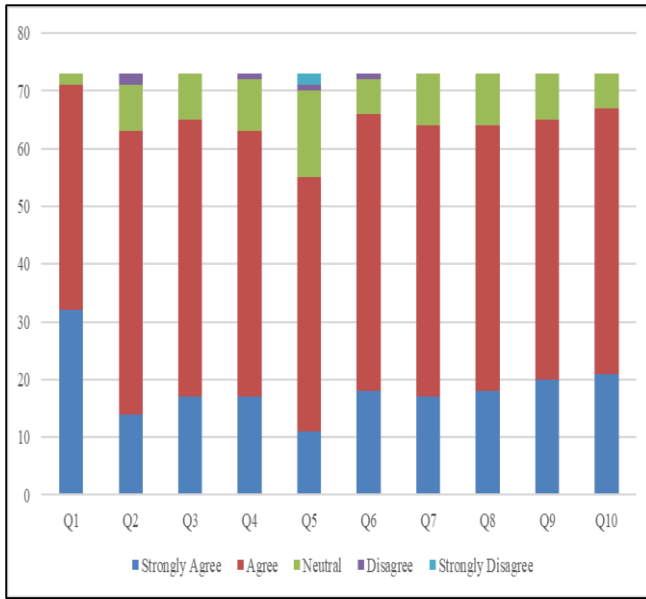


Figure 3: Students response to the questions from 1 to 10.

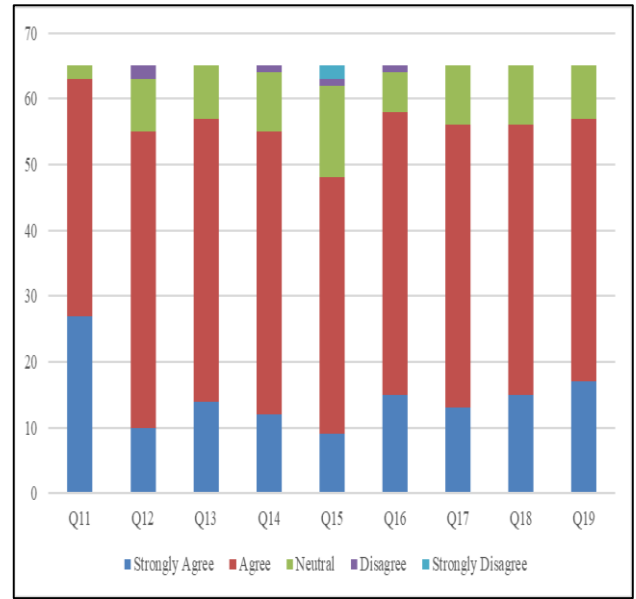


Figure 4: Students response on SGD to the questions from 11 to 19.

Table 2: Student response to SGT.

Question	Strongly agree (%)	Agree (%)	Neutral (%)	Disagree (%)	Strongly disagree (%)
Started and ended session on time	33 (41.2)	45 (56.2)	3	0	0
Ensure that group knew the objectives and expectations	16 (20.0)	55 (68.7)	8 (10.0)	2 (2.5)	0
Made eye contact appropriately	20 (25.0)	53 (66.3)	8 (10.0)	0	0
Appeared relaxed and at ease	20 (25.0)	50 (62.5)	9 (11.3)	2 (2.5)	0
Called students by their names	13 (16.3)	48 (60.0)	17 (21.3)	1 (1.3)	2 (2.5)
Demonstrated enthusiasm and the interest	20 (25.0)	53 (66.3)	7 (8.8)	1 (1.3)	0
Used humour appropriately	19 (23.8)	51 (63.8)	10 (12.5)	1 (1.3)	0
Adapted teaching based on group members past knowledge	20 (25.0)	52 (65.0)	9 (11.3)	0	0
Encouraged nonjudgmental communication	23 (28.8)	50 (62.5)	8 (10.0)	0	0
Demonstrated comfort with silence when appropriate	24 (30.0)	50 (62.5)	7 (8.8)	0	0
Effectively managed students who talked too much or too little	18 (22.5)	56 (70.0)	7 (8.8)	0	0
Encouraged students to ask questions	24 (30.0)	51 (63.8)	6 (7.5)	0	0
Used questions appropriately to promote a higher level of thinking	24 (30.0)	52 (65.0)	5 (6.3)	0	0
Provided group with positive and negative constructive feedback	20 (25.0)	54 (67.5)	7 (8.8)	0	0
Clarified confusing and complicated topics	23 (28.8)	52 (65.0)	6 (7.5)	0	0
Balance leading and facilitating the discussions	19 (23.8)	56 (70.0)	6 (7.5)	0	0
Reviewed important learning points at the end of the session	26 (32.5)	49 (61.3)	6 (7.5)	0	0
Overall was an effective facilitator/teacher	23 (28.8)	53 (66.3)	5 (6.3)	0	0
Overall, the group discussion was interesting and educational	27 (33.8)	49 (61.3)	5 (6.3)	0	0

DISCUSSION

The current study was conducted to assess the undergraduate students' perceptions and obtain their feedback on SGT sessions. It was found that 56.2% preferred interactive lecture and only 28.8% preferred SGT. This finding is similar to results of a study conducted by Singh et al which showed that 67.5% of the students agreed that SGT was non-essential for preparation of exams and students found it very stressful, waste of time, non-focussed teaching in seminar/tutorial and uncertainty of the accuracy of information from colleagues.¹¹ One of the reasons for students preferring interactive lecture over SGT may be due to effective interactive lecture classes conducted in the institute which catered to most of the active learning by the students and also due to the learning curve of the facilitators as well as students in this newer method of teaching. Frequent training of facilitators for conducting SGT sessions and addressing the perceptions of students in participating small group discussion may help in alleviating the lack of interest in SGT. Also, further research incorporating qualitative methods like focussed group discussion regarding challenges faced during small group discussion may help in understanding students' perspectives on SGT.

In contrast to these results, some studies showed students preferring SGT over lecture classes. Studies done by Sridevi et al, Sagar et al, Roshini et al and Zaima et al showed that the undergraduate medical students preferred SGT over traditional lectures.^{7,12-14}

Although the preference to SGT was low in the current study, majority of them, 61.3% agreed and 33.8% strongly agreed that small group discussion was interesting and educational. These results are similar to the findings of the study by Sahu et al, Sridevi et al, Sagar et al, Roshini et al and Dayananda et al who found that the majority of the students agreed that in small-group teaching they learned and retained information better.^{7,12,15,16} The majority of students opined that it motivated them to read the topic from additional resources for better understanding and participation in discussion and it was a very effective type of active learning.

In the present study, it was found that around 28.8% of the students strongly agreed and 66.3% agreed that the overall conduct of the SGT sessions by the facilitator was effective which is similar to the results of the study conducted by Annamalai et al using a five-point Likert scale to obtain the feedback on the facilitator, which showed 75% strongly agreed and 20% agreed that the overall conduct of the SGT sessions by the facilitator was effective.⁵

The study highlights the importance of SGT in medical education as it fosters active learning, enhances teamwork and communication skills, promotes critical thinking, and

improves knowledge retention, ultimately leading to better-prepared and confident healthcare professionals. This study should be followed by exploratory research using in-depth interviews and focussed group discussions and shortlist the reasons for not preferring SGT and measures should be taken to effectively manage them.

CONCLUSION

In the present study it was found that interactive lectures were preferred over other methods of teaching. This may be due to inadequate sensitization of students in participating in an SGT session. In this regard, the study will serve as a baseline for obtaining students' perspectives on SGT which will help the facilitators to adopt to the students' needs and preferences. Also, as most of the students agreed that the overall conduct of SGT sessions was effective, frequent SGT sessions with detailed feedback on problems faced by students during SGT should be evaluated and suitable measures should be taken to alleviate the challenges to effectively impart knowledge.

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Conflict of interest: None declared

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