



## Group Students Seminar: an Interactive Way to Learn Physiology

### KEYWORDS

group student seminar, benefits

#### Dr Ruth N Joshi

Professor, Department of Physiology, Smt. Kashibai Navale Medical College & General Hospital, Pune, 411041

#### Dr. Pallavi A. Kulkarni

Associate Professor, Department of Anatomy, Smt Kashibai Navale Medical College & General Hospital Pune 411041

#### Dr Nitin Joshi

Professor, Department of Physiology, Smt. Kashibai Navale Medical College & General Hospital, Pune 411041

**ABSTRACT** *The present study was taken up to introduce a novel interactive seminar: "group student's seminar" for the enhancement of the teaching-learning process in Physiology. The study was done on 1 MBBS students (100). A pretest questionnaire was circulated amongst the students before the seminar & a post test questionnaire after the seminar. The mean score of the pretest group was  $3.788 \pm 1.95$  SD and that of the post test was  $6.28 \pm 2.005$  SD. Statistical analysis was done by using z test where  $z = 15.519$  with  $98^\circ$  of freedom.  $95\%$  confidence interval for difference =  $2.176$  to  $2.814$  where  $P=0.0001$  is highly significant. This showed that group student's seminar adds to the knowledge of the students. Feedback form analysis showed that students benefited in the areas of concept clearance, group interactivity & communication skills were improved.*

### INTRODUCTION

Teaching learning process has been evolving through different interactive sessions designed for the students. Interactive seminars enables active participation, peer interaction, questioning the minds of students, handling of debatable issues, effective presentational skills, presenting opinions(1). Small study groups foster interactive learning and positive cognitive effects, such as activation of prior knowledge, recall of information, individual and collaborative knowledge construction, and cognitive conflicts leading to conceptual change. Small group learning was also reported to have a direct positive effect on students' motivation to learn and motivation has been shown to play a central role in promoting group productivity, elaboration of knowledge, and interaction in different settings. Finally, interactive learning has been evaluated more positively than formal lecturing by medical students and medical professionals alike. (2-8)

Seminars were conducted earlier in the department of Physiology, Medical teaching institute in Pune & the involvement of the students was limited. This educational project was taken up to ensure active involvement of all 100 students and benefit them academically as well as professionally in the year 2012. (9)

### MATERIALS & METHODS:- PROCEDURE:-

10 small topics of 3 different systems of Physiology (General physiology, Blood, Nerve Muscle Physiology) were declared 1 month prior to the actual date of seminar. The students were given time to read & prepare. The presentators were included by freewill. 1 student was absent so the number of students were 99 for this study. All the students gave their consent & showed willingness to be a part of this group student seminar.

10 presentators by freewill were given topics declared by the department of Physiology. They were guided for their presentation.

10 students were selected as judges.

2 comperer to host the seminar, 2 timekeepers.

In all 24 students in the first half of the seminar were involved.

Later half of the seminars, 75 students were divided into 6 subgroups as:-

- Group A :- 15 students
- Group B :- 15 students
- Group C :- 15 students
- Group D :- 15 students
- Group E :- 15 students

Each presentator was given 5 minutes followed by 2 minute question answer session. The judge's checklist (detailed one) for assessing the student presentators was provided. The scoring was done on the presentation, content, communication skill, audiovisual aids, question answer session & time duration. After this group A & B were to discuss the good points of the 10 presentators. Group C & D had to disclose the areas where the presentators could have improved. Group E was to summarise the whole event & later report. Groups were formed on the basis of class test marks. Students were shuffled in between average, below average & above average in order to have a balance of mixed ideas.

These groups had to discuss amongst themselves under the guidance of faculty. They had to identify their leader, recorder, reporter, and timekeeper. The group discussion was for 10 minutes. After this, the reporter briefed the points to everyone.

A pre-test questionnaire pertaining to the seminar topic was distributed before the seminar & post- test after the seminar was distributed.

Feedback forms were also filled by the students. Certificates were distributed to the presentators. 1 student was absent so the number of students were 99 for this study.

### RESULT PRETEST & POST TEST SCORE ANALYSIS

GROUP	QUANTITY	MEAN marks obtained	STANDARD DEVIATION
PRETEST	99	3.788	1.955
POST TEST	99	6.283	2.005

MEAN DIFFERENCE = 2.495

STANDARD DEVIATION DIFFERENCE = 1.6

95% confidence interval for difference= 2.176 to 2.814

Z= 15.519 with 98 degree of freedom

P = 0.0001, highly significant.

From the application of z test on pre & post test it is found to be highly significant.

This proves that group student's seminar adds to knowledge of the students.(4)

#### B) FEEDBACK FORM ANALYSIS:-

1. 96 students enjoyed the seminar & 2 students did not enjoy 1 did not comment.

2. 71 students were satisfied, 26 were highly satisfied and 2 were satisfied.

3. 83 students felt that they were actively involved, 5 felt that they were not and 11 did not comment.

#### "Table no 2 about here"

4. Perception of students in identifying their role

Role	Allotted by the Teacher	Perceived by the Student
Presentators	10	10
Comperer	2	2
Judge	10	10
Time keeper	2	5
Team Member	76	55
Recorder	5	7
Reporter	5	5
Any other	0	2

It is seen that in the above table no 2 the roles allotted by the teacher were similarly perceived by the students except in the case of time keepers, there were additional time keepers due to different groups(Group A,B,C,D,E) . In case of team members & recorders, differences in figures are probably due to students being not actively involved or lack of understanding of their role.

5. 87 Students who perceived their roles founded it to be beneficial, 7 did not find it to be beneficial, 1 found it to be slightly beneficial and 4 did not comment anything

6. 93 Students stated that they guided by their teacher, 5 felt that they were not guided and 1 did not comment.

7. 37 Students experienced active learning, 7 had passive learning, 54 experienced both kind of learning and 1 experienced no kind of learning.

8. 67 Students felt that their fellow mates actively participated, 8 felt that there was no active participation and 24 did not say anything.

9. 54 Students attended/ participated in previous seminars, 44 did not attend the previous one and 1 did not mention.

10. 19 Students rated the present seminar excellent to the previous one, 31 rated it as good, 5 rated it as fair and 44 did not attend the previous one.

11. 97 Students desired to have interactive sessions in the future.

12. 37 Students rated the present seminar as excellent, 54 students rated it to be good, 6 rated it to be fair and 2 did not comment.

13. Benefits of seminar stated by the students:

- Concept clearing 3
- Knowledge improvement 10
- Group interactivity 22
- Improved communication skills 29
- Improved understanding 14
- Did not benefit 6
- Did not comment 5

14. Improvement suggested by number of students for the present seminar

- More time for presentators & the seminar 36
- Time management 10
- Technical arrangement 9
- Clear idea, presentator's rehearsal, better incentive, snack provision

More questions to audience, presentators, teachers answering,

Prior selection of judges. 44

#### DISCUSSION

According to Eun-Kyung Chung & others, most students' perceived team based learning activities to be more engaging, effective and enjoyable than conventional didactics & the effect of cooperative learning was also observed. In addition, team based learning improved student performance especially that of academically weaker students. The present study engaged the students since students perceived their role & felt they were benefitted (table 2) & group students seminar was enjoyed by 96 students.(10,12)

According to the studies done by Zuzana de Jong et al, most of the students were satisfied with their tutors or lecturers (87% versus 86% in the small group tutorials and interactive seminars, respectively) and agreed that they had learned a great deal from the problems presented (87% and 84%, respectively) (1). In similar terms in this present study as mentioned in the results 93 students were satisfied with the guidance of the teacher.

Although the students were more satisfied with the small group tutorials, about one-third preferred interactive seminars, which accommodate larger groups, when given a choice according to study done by Zuzana de Jong, Jessica AB van Nies.(1). 97 students preferred to have interactive sessions in the future in this present study. As compared almost all the students out of 99, this is major group who desires to gain knowledge by group students' seminar.

A majority of students (68.8%) preferred a method that contained peer-led seminars and instructor-led lectures. These results may indicate that integration of active and passive learning into undergraduate courses may have greater benefit in terms of student preference and performance was seen in studies done by Minhas & others. (9).The present educational study showed that 83students actively learned the topic.63 mentioned peer involvement, suggesting that the students were aware of their fellow mates involvement in the present seminar.

Sprujit A, Jaarsma AD, Hrynychak P, stated that coherence and alignment of the different educational methods, the amount and type of seminar questions and the amount and clarity of the preparation materials affected seminar learning(11,12,13). The present study benefitted the students in the areas of concept clearance, knowledge improvement, group interactivity, communication skills & their understand-

ing improved through this group student's seminar. This could be due to self interest of the students, the topics that generate interest for learning, peer assisted learning, peer motivation, confidence developed during group interaction.

#### CONCLUSION:-

Group students seminar could be implemented successfully as a learning process. All 99 students were actively involved as presentators, judges, team members, time keepers, comperers, recorders, reporters. Presentational skills, peer involvement were also achieved through group discus-

sion. Draw backs were time management: recommendation: 3hours required.

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