

MEDICAL STUDENTS' PERCEPTION ON PEER ASSESSMENT: AN INNOVATIVE METHOD OF STUDENT CENTRED LEARNING.

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Abstract

Background: Peer assessment encourages students to be more involved in their learning process with greater responsibility along with critical analysis of their work. Students learn to reflect on the quality of their work and the importance of effective feedback. **Objectives:** With this background the present study was planned with an objective to describe the perception of students to peer critique on their assignment presentation (Undergraduate seminars). **Method:** This was a cross sectional study, which was carried out in Department of Community Medicine, Era's Lucknow Medical College & Hospital. **Results and Conclusions:** The study showed that majority of students found the peer evaluation as a good method of self improvement. Nevertheless, a group of students were a bit uncomfortable while receiving negative comments from the peer. There was a significant difference found about the way, the comment is perceived by the male or female student.

Key words: Peer assessment, students' perception, student centred learning, medical education

Introduction

In medical schools, students learn in large group settings as well as small group settings. Every student in a class is committed to a common purpose, performance goals, and an approach for which they hold themselves mutually accountable. Peer assessment has been defined as “an arrangement for peers to

consider the level, value, worth, quality, or successfulness of the products or outcomes of learning of others of similar status.”¹

Peer assessment allows students of a class to assess other students as well as themselves. Peer assessment provides data that might be used in assigning individual grades for team assignments like group seminars etc.

Peer feedback is an important method of assessing students' competency. Peers may be less discriminating than faculty in their assessments of fellow students. This type of assessment is based on student centred learning. As the name itself suggests this type of learning is focused on the student's needs, abilities, interests, and learning styles with the teacher as a facilitator of learning. In "student centred learning" the most difficult as well as critical part is the assessment. Here students have to participate in process of assessment as well as have to demonstrate their learning. Various studies have shown that self and peer assessment assist students in developing some of the important professional skills such as reflection. A variety of positive effects of peer evaluation have been documented and it is found that peer evaluation can promote critical thinking in medical students. There is substantial evidence that peer assessment can result in improvements in the effectiveness and quality of learning. Peer assessment also provides an opportunity to medical students to actively participate, interact and observe peers. Peer assessment also has a potential to relieve faculties from the extra burden, in present scenario where more and more number of students are entering into the medical schools. In present situation, medical council of India is increasing the capacity of a medical school to admit students' from 150 to 200, but the number

of faculties needed is not increased in that pace. In spite of all these benefits, the use of peer assessment is very restricted and has not been accepted well worldwide by faculties in different medical schools.

Various studies had suggested that students lack confidence in this process and believe that assessment is exclusively the domain of faculties.²⁻⁶

Aim & Objectives:

The aim of this study was to describe the perception of students to peer critique on their assignment presentation (Undergraduate seminars)

Material & Method:

Study type: Cross sectional study

Study period: Six months

Study Area: Community Medicine department of Era's Lucknow Medical College & Hospital

Study Sample: Undergraduate students of 5th Semester.

Methodology:

The study was carried out in Department of Community Medicine, Era's Lucknow Medical College & Hospital. During their 5th term, in academic year, undergraduate students are posted in Department of Community Medicine

for a period of six months. As per guidelines from Medical Council of India, they undergo teaching and training about the communicable and non communicable diseases by using different teaching methodologies, viz Didactic lectures, Clinical postings, demonstrations and Tutorials. During one spell in Tutorials and demonstration classes, a group of 25 students are posted at one time in the department. Total of 75 students were posted in the department, in a period of six months. For the purpose of study, after taking due clearance from the Institutional Ethical Committee, fifth Semester students were divided into five groups with five students per group. Each group was allotted topics of seminar during their Tutorial and Demonstration classes. They were sensitized regarding the way of presentations and other aspect of the topics. Regarding the perception of students for this approach, a pre validated and pre tested questionnaire was used. Their views regarding peer critique was collected and analysed, using the Epi Info software (version 6.04).

Results and Discussion:

Study results showed that students agreed well on the usefulness of peer assessment.

Means and standard deviations of responses of students on the 5- point Likert scale	
This is a good practice to involve peer feedback	4.21 (0.51)
Comments of the peers regarding strength are encouraging	4.48 (0.49)
Comments of the peers regarding weakness are useful for improvement	3.71 (0.77)
I'm not comfortable while receiving feedback from peers	3.12 (0.33)
I'm not comfortable while providing feedback to peers	3.99 (0.52)
Peer feedback is not a useful method	2.11 (0.32)

- Ratings used a five-point Likert scale ranging from 1=strongly disagree to 5=strongly agree

Most of the students strongly believed that they felt highly encouraged when peers gave good comments on the strength of their presentations. The satisfaction level decreases when it comes to the negative feedback or when peers pointed about the weakness in the presentations. Similar results were seen in studies conducted by Gukas et al ⁷ and Samar A Ahmed et al ⁸

When asked about the perception regarding how fair they consider these assessments to be, students were of the belief that they had low level of confidence in this issue. This may be

due to the traditional perception of the status of the faculty as an unquestioned source of knowledge. This indicates a need for more training in effective peer assessment and explanation of its values and students' roles. Similar results were shown by Samar A Ahmed et al⁸

Many studies have demonstrated positive feedback of students to peer evaluation as well as its capacity to promote critical thinking⁹. Peer evaluation is also believed to enhance learning and critical understanding of evaluation criteria and the knowledge gap¹⁰

Regarding the problems which students faced during the peer assessment was that they felt that the process was not very objective. Their peers were not that competent to give effective feedback. Some of the personal factors also came into play while giving the peer assessment. Similar results were reported in study conducted by Samar A Ahmed et al⁸ and White¹¹

Present study showed that there was a significant difference observed between the number of male and female students who are not comfortable with giving or receiving critique with a tendency of female percentages to be higher (41%) than male percentages (13%). Similar observations were seen in study conducted by Samar A Ahmed et al⁸ and Vasyura¹² who concluded that there is a

discrepancy between male and female communicative capacity.

Conclusion: The study showed that majority of students found the peer evaluation as a good method of self improvement. Nevertheless, a group of students were a bit uncomfortable while receiving negative comments from the peer. There was a significant difference found about the way, the comment is perceived by the male or female student. Present study presents some new approaches and ideas to teachers who are thinking of adopting peer assessment as one of their teaching strategy.

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References

1. Topping KJ, Smith EF, Swanson I, Elliot A. Formative peer assessment of academic writing between postgraduate students. *Assess Eval Higher Educ* 2000; 25: 149–69.

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2. 2. Ballantyne R, Hughes K, Mylonas A. Developing procedures for implementing peer assessment in large classes using an action research process. *Assess Eval Higher Educ* 2002; 27: 427–41.
3. 3. Brindley C, Scoffield S. Peer assessment in undergraduate programmes. *Teach Higher Educ* 1998; 3: 79–89.
4. 4. Searby M, Ewers T. An evaluation of the use of peer assessment in higher education: a case study in the School of Music, Kingston University. *Assess Eval Higher Educ* 1997; 22: 371–383.
5. 5. Smith H, Cooper A, Lancaster L. Improving the quality of undergraduate peer assessment: a case study for student and staff development. *Innov Educ Teach Int* 2002; 39: 71–81.
6. 6. Van Hattum-Janssen N, Pacheco JA, Vascoceles RM. The accuracy of student grading in first year engineering courses. *Eur J Eng Educ* 2004; 29: 291–298.
7. 7. Gukas ID, Miles S, Heylings DJ, & Leinster SJ. Medical students' perceptions of peer feedback on an anatomy student-selected study module. *Medical Teacher*. 2008; 30 (8): 812-814.
8. 8. Ahmed SA, Van Der Molen HT. Student Perception Of Peer Critique Of Student-Selected Study Components In A Forensic Medicine Curriculum. *Journal of Medicine and Biomedical Sciences* 2010; 1(3):22-30
9. 9. Topping K. Self and peer assessment in school and university: Reliability, validity and utility. *Optimising new modes of assessment: In search of qualities and standards: 55–87*. London: Kluwer Academic Publishers.
10. 10. Brown G, Bull J, & Pendlebury M. Assessing student learning in higher education. London: Routledge. In Kwok L. *Students' Perceptions of Peer Evaluation and Teachers' Role in Seminar Discussions*. *Electronic Journal of Foreign Language Teaching*. 2008; 5(1): 84–97.
11. 11. White E. Student perspectives of peer assessment for learning in a Public Speaking course. *Asian EFL Journal*. 2009;33: 1-31
12. 12. Vasyura SA. Psychology of male and female communicative activity. *Spanish Journal of Psychology*. 2008;11(1): 289-300.