

Students Perception on Teaching Learning and Evaluation Methodologies Applied in Physiology

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Abstract

Background: Outgoing students from some colleges in particular from the central and some specific state medical colleges are better equipped with knowledge, skills and attitude than the rest. On the contrary some medical colleges produce inefficient medical graduates. This article is an initiate in finding out the best teaching learning and assessment methods in physiology from the students' perspective, to reduce the knowledge and skill gap between the students of different medical colleges. In the regular departmental meetings on better performance of the students, it is much needed to take the feedback from the faculty members also for improving teaching learning and evaluation methods in any educational institutions including medical colleges. **Aim:** To record and analyse the feedback from the students on present teaching learning and the evaluation methods used in the department of physiology in a medical college in South Indian state of Telangana. **Materials and Method:** The present study was conducted on 68 first year under graduate medical students. Two sets of questionnaires were used for acquisition of qualitative and quantitative data. **Results:** Much need to change in the present teaching learning and evaluation methods. **Conclusion:** All the students felt that many changes are required in the present teaching learning and evaluation methods for better performance of the students.

Keywords: Perception, Medical Education, Teaching Learning Methods, assessment, performance.

Introduction

Teaching learning and evaluation are an integral part of educational system that lead to meaningful way of living. Medical under graduate students will study anatomy, physiology and biochemistry in their first year. Unlike earlier days, presently the duration of first year MBBS course is only one year, and to clear the university examinations at the end of the first year, many times students are forced to study the concise notes of the three subjects. This reduces the quality of education by lacking the conceptual understanding. The primary objective of the medical education should be a holistic approach, which enhances the problem solving

skills of the medical professionals with the critical and logical thinking¹. If we know the preferred learning modalities of the students, we can adopt new methods of teaching accordingly². The classroom teaching must focus on amount of learning but not on the quantum of the syllabus to be covered³. Are the present teaching learning and evaluation methods are efficient enough to impart knowledge for effective learning? The present study is aimed to understand the students' perception on teaching learning and evaluation methods used in the department of physiology in terms of effective learning.

Objectives

To assess the perception of students on teaching learning and evaluation methods in learning physiology using a questionnaire.

Materials and Method

After obtaining the written informed consent, sixty eight first year MBBS students were recruited in

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the study. The study was carried out after the ethical clearance from the Institutional Ethics Committee (IEC). Present study was carried out over a period of six months from the month of April till the end of September in the year 2018. The study was carried out in the physiology department. **Inclusion criteria:** Students who were willing to give consent and participate.

Exclusion criteria: Students who are not willing to participate.

Methodology: First of all focused group discussion was carried around 45-60 minutes before administering the questionnaire. Questionnaire for assessing the perception of listeners on teaching learning and evaluation methods was initially developed and later refined at Harvard University over 10 years ago by Dr. Ron Ferguson. We adopted it in the present study after validation. Quality of teaching, content of the topic, process of teaching, teacher and student characteristics and finally learning outcomes were discussed thoroughly. Clarified the doubts raised by the students. Test was conducted by mailing the two sets of questionnaires.

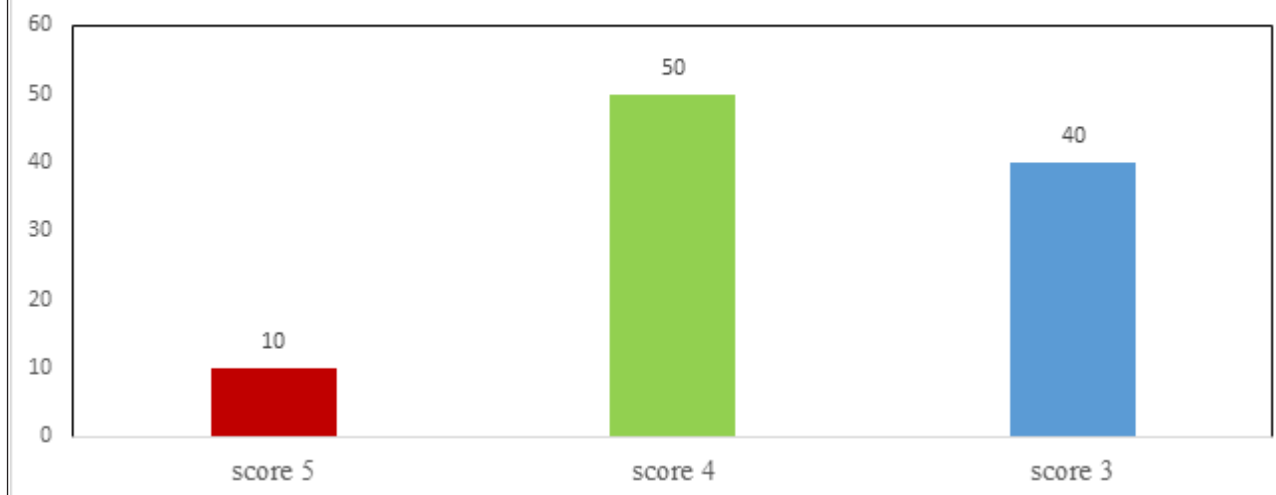
In keeping mind for assessing their classroom experience with each teacher across 7 dimensions two sets of questionnaires were adopted. First set of questionnaire, consisting of open ended questions³

developed by Schiekirka et al, focused on students perception on quality of teaching and class evaluation in general, having 11 questions listed in detail in table 1. Second set of questionnaire is for the perception of the students on teaching learning methods⁴ developed by Dr. Ron Ferguson, consisting of closed ended questions listed in table 2. Present project allows the students to assess their classroom experience with each teacher across 7 dimensions, namely;

1. Caring about students (Encouragement and emotional support)
2. Captivating students (Learning seems interesting and relevant)
3. Conferring with students (Students sense their ideas are respected)
4. Clarifying lessons (Success seems feasible)
5. Consolidating knowledge (Ideas get connected and integrated)
6. Challenging students (Press for effort, perseverance, and rigor)
7. Controlling behavior (Culture of cooperation and peer support)

Graph 1: Students' perception regarding teaching learning methods in% for Qno:1-26



Graph 2: Rating of the course in proportions

Results

After obtaining, the data was compiled and tabulated. The qualitative data was analyzed for content analysis by the investigator and another researcher and summarized in table 2. Student's opinion on total 26 (qualitative data) closed ended questions were represented in proportions (Graph-1). Rating of the course represented in graph 2.

Discussion

21st century medical teacher has the access to different technological tools on current medical education programs. Teacher must be a facilitator, for this he requires guidance from senior faculty and training. Faculty development programs on technical development will be huge help. Teacher shall clarify expectations and practical details to the students⁵. Teacher should be a role model by inspiring and influencing the peers and students for developing new skills in achieving their personal and professional goals⁶⁻⁹.

On teaching and learning methods:

Students are having direct access with the teachers and are the firsthand consumers of a teacher's service, this is the basis for the present study¹⁰. More than sixty percent of students were against three points in the closed ended questionnaire and they are; 1) Physiology class does not keep the attention of the students and make them bored 2) I (student) don't like the way we learn in physiology class and they get bored 3) Students' behavior in the class makes the teacher angry. First two reasons were in favor of the teacher and their teaching

in a positive way. The third point though we took the feedback from the students we feel that we are also supposed to take the feedback from the teachers as well. And the feedback from the perspective of the physiology teachers will be our next focus, which will give a broader picture of the whole scenario. All the students were zeroed down unanimously on six points in the closed ended questionnaire and they are ; 1) Students are interested in learning physiology 2) Students want the active participation of junior and senior faculty in teaching 3) The comments that students get on their work help them to understand how to improve 4) Their physiology teachers want to share their thoughts 5) The most effective evaluation tools include the formative assessments, summative assessments, practical exams, viva and discussions 6) Revision is required at the end of every lecture. Better to understand the students' preferred way of learning and evaluation which may eventually yield positive results^{11,12}. So we also took the feedback from the students who have suggested that, following the above six points mentioned will make them to understand the physiology in a better, easier and faster way. Students preferred interactive teaching to keep them more attentive. Students listed a number of characteristics of the teacher, which were also coinciding with the earlier reports. Among the teaching learning modalities in didactic lectures one of the previous study showed that majority of the students are in favor of a combination of chalk and blackboard with power point presentation for better understanding of physiology¹³. But in the present study in addition to the power point and chalk and blackboard combination, they also

preferred animation videos. Regarding the rating of the course 50% of the participants gave score 4, 40% gave score 3 and 10% gave score 5, as represented in graph 2. It reflects the satisfaction of the students but not the quality of teaching.

Students defined good teaching from their gut feeling and it varied from person to person the gist of it is;

- i. To keep it simple so that everyone can understand
- ii. Teaching with more interactive sessions with students
- iii. Teaching should create interest in student's minds for the subject

They prefer encouragement and summarization at the end of the class from the teacher to enhance their attention and interest in learning physiology. Students feedback allows to refine the definition of effective teacher¹⁴.

On evaluation methods:

There were studies, in support of participants gender doesn't impact on evaluation. So in the present study though the participants are both male and females we did not evaluated their findings separately¹⁵. Students opined positively on the purpose of evaluation. Some of their opinions on purpose of evaluation are;

- i. To assess the understanding capability of an individual and the ability to present
- ii. To test knowledge
- iii. To know how much knowledge student gained
- iv. Evaluation is just to know the way how evaluation is expecting us to present the thing that is imp among everything we inculcated and Skills in presentation

Conclusion

Present study concludes that majority of the students opine on didactic lectures should be more interactive, needs the active participation of the teacher.

Limitations:

Data was collected from those who participated

voluntarily. If everyone participates we may get more information. Some of them were afraid to write thinking that their results may be affected with it.

Ethical Clearance: Taken from MediCiti ethical committee.

Source of Funding: Self

Conflicts of Interest: Nil

References

1. Flexner A, editor. Medical Education in the United States and Canada: A Report to the Carnegie Foundation for the Advancement of Teaching. Boston: Merry mount Press; 1910.
2. Newble DI, Entwistle NJ. Learning styles and approaches: implications for medical education. Med Educ, 1986; 20(3):162–75.
3. Schiekirka, S, Reinhardt, D., Heim, S, Fabry G, Pukrop, T., Anders, S., & Raupach, T. Student perceptions of evaluation in undergraduate medical education : A qualitative study from one medical school. 2012; 12(1) 12-45.
4. Ferguson, R., and Ramsdell, R. (2011). Tripod classroom-level student perceptions as measures of teaching effectiveness. Retrieved from http://www.gse.harvard.edu/ncte/news/NCTE_Conference_Tripod.pdf
5. Tabinda Hasan, Ibrahim Bani, Husein Ageel and Mamood Fauzi. An Ideal Medical Teacher, Education in Medicine Journal, 2011; 3 (1): e54-e59.
6. Paice E, Heard S, Moss F. How important are role models in making good doctors? BMJ 2002; 325:707–10
7. Wright SM, Kern DE, Kolodner K, Howard DM, Brancati FL. Attributes of excellent attending-physician role models. N Engl J Med 1998; 339:1986–93
8. Steinert Y, Mann K, Centeno A, Dolmans D, Spencer J, Gelula M, Prideaux D: A systematic review of faculty development initiatives designed to improve teaching effectiveness in medical education: BEME Guide No. 8. Med Teach 2006; 28:497–526.
9. Goe, Bell, & Little, 2008 approaches to evaluate teachers' effectiveness: A research synthesis. Washington DC. National comprehensive center for teacher quality. Retrieved on dec 14th 2018.

10. <https://www.wested.org/wp-content/uploads/goe-research-synthesis.pdf>
11. Lisa Vaughn, and Raymond Baker, Teaching in the medical setting: balancing teaching styles, learning styles and teaching methods. *Medical Teacher*. 2001; 23(6):610-612.
12. Lubawy WC. Evaluating teaching using the best practices model. *Am J Pharm Educ*, 2003; 67(3): article 87.
13. Baker, R. S. J. d. 2011. "Data Mining for Education." In *International Encyclopedia of Education*, 3rd ed., edited by B. McGaw, P. Peterson, and E. Baker. Oxford, UK: Elsevier.
14. Nagothu RS, IndlaYR, Paluru R. Effective physiology teaching methods: from the perspective of first year MBBS student. *Indian journal of clinical anatomy and physiology*. 2015; 3(3), 229–262.
15. Wilkerson, D.J., Manatt, R.P., Rogers, M.A. Diamondville, Ron Maughan. *Journal of Personnel Evaluation in Education* 2000; 14: 179.
16. Marsh HW, Roche LA: Making students' evaluations of teaching effectiveness effective: The critical issues of validity, bias, and utility. *Am Psychol* 1997; 52:1187–1197