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RESEARCH ARTICLE

ASSESSMENT OF MEDICAL STUDENT'S ATTITUDE TOWARDS DIDACTIC THEORY LECTURES TAKEN IN MICROBIOLOGY FROM A PRIVATE MEDICAL COLLEGE IN SOUTH INDIA

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ABSTRACT

Introduction: The attitude of medical students towards the proficiency of teachers and their teaching skills is very influential and has changed over a period of time. Periodic Self-evaluation of faculty to improve teaching is pivotal to roughly know where we academically stand. This study is mainly capacitated to know, analyze about the teaching skills of the Microbiology department faculty from the students point of view.

Aim of the study: To evaluate the attitude of second year medical students towards the teaching principles of a faculty during his microbiology didactic lectures for a period of two months.

Materials and Methods: A total of 142 second year medical students were involved as study participants. The study was conducted as a prospective epidemiological study for duration of three months and a properly structured feedback assessment tool in the form of a questionnaire was given to be duly filled by the subjects to assess the attitude of second year medical students towards their teachers exclusively on their overall teaching methods and skills. A Five-level Likert's criteria (Table 1) were used to analyze a few questions in the questionnaire. A set criterion for determining student's attitude towards faculty (Table 2) was in IBM SPSS 20.0 version software, followed by tabulation of results and interpretation.

Results: A total of 142 Second year MBBS students were involved in the study but only 110 out of 142 (78%) gave informed written consent and expressed their willingness to undertake the questionnaire. The sex distribution in terms of male and female ratio was 0.69. Nearly 76% (101/110) of the students had revealed that they are treated as adults by the faculty. Around 89% of the students were satisfied with the faculties teaching skills and 78% were satisfied with motivation skills of the faculty. Only 80% of the students agreed for the good quality of content presented by the faculty during the lecture class.

Conclusion: This is a novel study conducted for the first time in this part of southern India targeting medical student's attitude towards the efficiency of a teaching faculty. To conclude, faculty of Microbiology department had utilized the essential elements of a theory class in terms of content, language, teaching material used, inspiring students and imparting knowledge. The overall attitude of medical students towards the teaching faculty taking didactic lectures was good but continuous monitoring of faculty and student performance by means of periodic assessments is mandatory.

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INTRODUCTION

The word 'Education' had been etymologically derived from two latin words (Educare & Educatum) where Educare denotes 'to train or mould' and Educatum means 'the act of teaching' the student. Teaching is an important dogma of medical education which kindles the interest, motivates the student to learn new things, educates him or her to understand the novel concepts and values which the student should know and it must be imparted as a part of the curriculum to facilitate or guide the student in all disciplines of medicine, which would further enhance the thinking capacity and should aim to free him/her of the darkness of ignorance and lack of knowledge by the pearls of wisdom which does not always happen in our set-up. As teachers we don't always self-evaluate our teaching caliber which is pivotal to facilitate and understand the attitude of students towards us. The objective of every medical faculty is to give rise to a skillful, knowledgeable, ethically bound, disciplined Indian medical graduate and teaching by a faculty is the basis to start with. The attitude of medical students towards the proficiency of teachers and their teaching skills is very influential (Mohan *et al*., 2010) and has changed over a period of time. Periodic Self-evaluation of faculty to improve teaching is pivotal to roughly know where we academically stand. As teachers, we face

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exhaustive criticism from students regarding curriculum design, implementation methods and clinical application of knowledge via didactic lectures, Small Group teaching, and Problem Based Learning techniques (Wood, 2003; Ghosh and Dawka, 2000; Richardson, 2008) and etc. The prime objective of a medical faculty in every medical college is to give birth to a skillful, knowledgeable, efficient, ethically bound and disciplined Indian Medical Graduate (IMG). This study is mainly capacitated to know, analyze about the teaching skills of the Microbiology department faculty from the students point of view.

MATERIALS AND METHODS

Aim

To evaluate the attitude of second year medical students towards the teaching principles of a faculty during his microbiology didactic lectures for a period of two months.

Objectives

1. To evaluate student's perception regarding the motivation, teaching, communication and linguistic aspects of a faculty during the lecture class.
2. To evaluate the effectiveness of teaching with regard to content and teaching methods.
3. To analyze student's level of satisfaction about the faculty with respect to teaching content, teaching style, clarity of speech, language used insisting on newer concepts, inculcating research ideas.
4. To determine the pitfalls and strengths of teaching by the faculty as per the students.
5. To identify the risk factors affecting student's behavior and activity during lecture the lecture classes the memory of students.

Research methodology

Institutional Humans Committee Clearance (IHEC) and study participant's written informed consent for the research study was obtained and a total of 142 second year medical students were involved as study participants. The study was conducted as a prospective epidemiological study for duration of three months and a properly structured feedback assessment tool in the form of a questionnaire was given to be duly filled by the subjects to assess the attitude of second year medical students towards their teachers exclusively on their overall teaching methods and skills. An assessment criterion was set with a maximum of 50 marks to grade the attitude of students towards presenter and the presentation of Microbiology didactic lectures. Each Yes or No question was given one mark or two marks based on its importance and no negative marks were awarded to questions unanswered or answered wrong. Open ended questions were not given any mark. The attitudes of students towards faculty were classified into 6 categories based on the marks obtained. A Five-level Likert's criteria (Table 1) were used to analyze a few questions in the questionnaire. A set criterion for determining student's attitude towards faculty (Table 2) was in IBM SPSS 20.0 version software, followed by tabulation of results and interpretation.

Inclusion criteria

1. Students who are willing to give consent to participate in the research study.
2. Students who were present in the class during the questionnaire study.

Exclusion criteria

Partially filled or unfilled questionnaire even after giving consent.

RESULTS

A total of 142 Second year MBBS students were involved in the study but only 110 out of 142 (78%) gave informed written consent and expressed their willingness to undertake the questionnaire. The sex distribution in terms of male and female ratio was 0.69. Nearly 76% (101/110) of the students had revealed that they are treated as adults by the faculty. And 92% (101/110) students had shown their interest in attending didactic lectures taken by faculties of Microbiology department. Nearly 90% of the students had reported they were satisfied with the faculty's class. Moreover 90% of the students were on time to the morning 8.00-9.00 AM Microbiology lecture theory class. Around 84% (92/110) of the students reported that they had consumed breakfast before coming to class. Nearly 98% of the students expect the faculty to be a friendly facilitator. About 99% of the students do not like faculties using purely a black board to take classes. Only 90% of the students felt that the faculty's linguistic skills are good.

Table 1. Likert's criteria

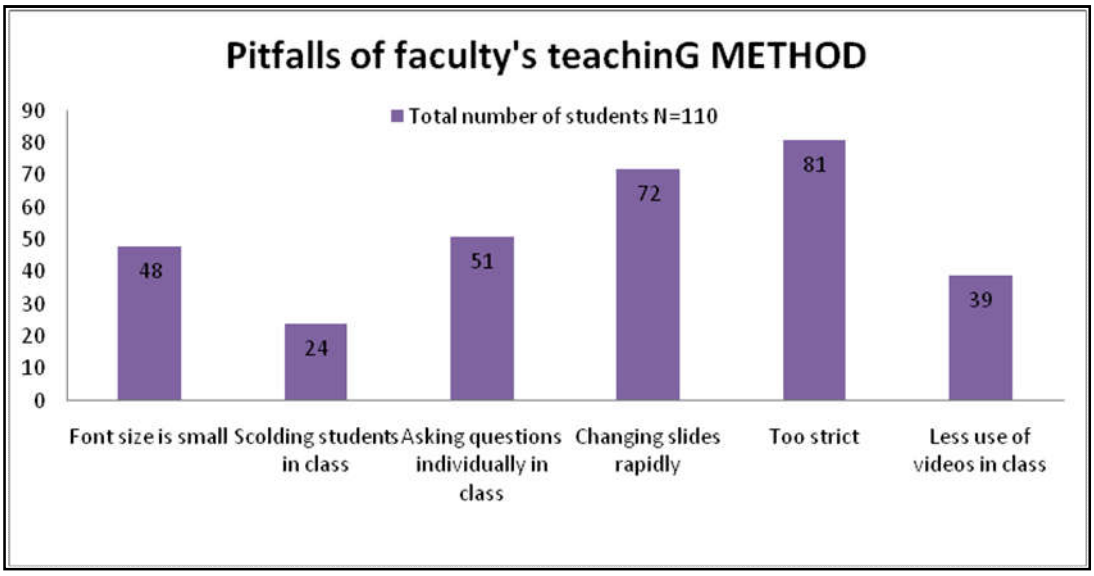
Scale	Student's graded response
1	Strongly disagree
2	Disagree
3	Neutral
4	Agree
5	Strongly agree

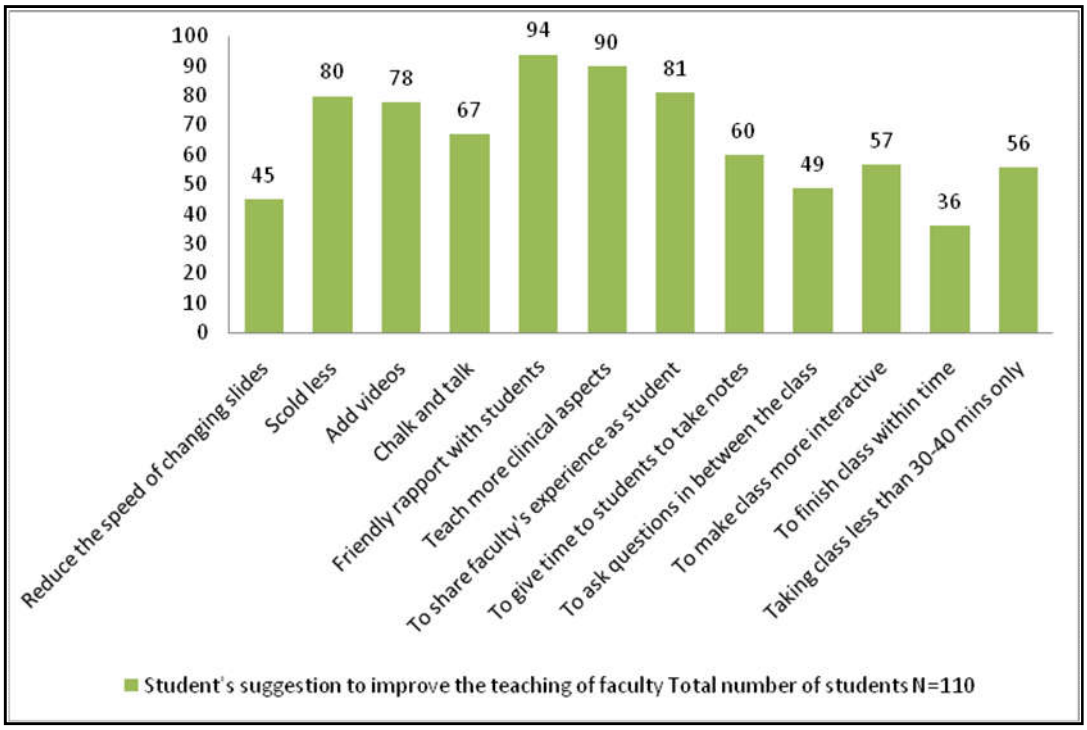
Table 2. Criterion to evaluate student's attitude

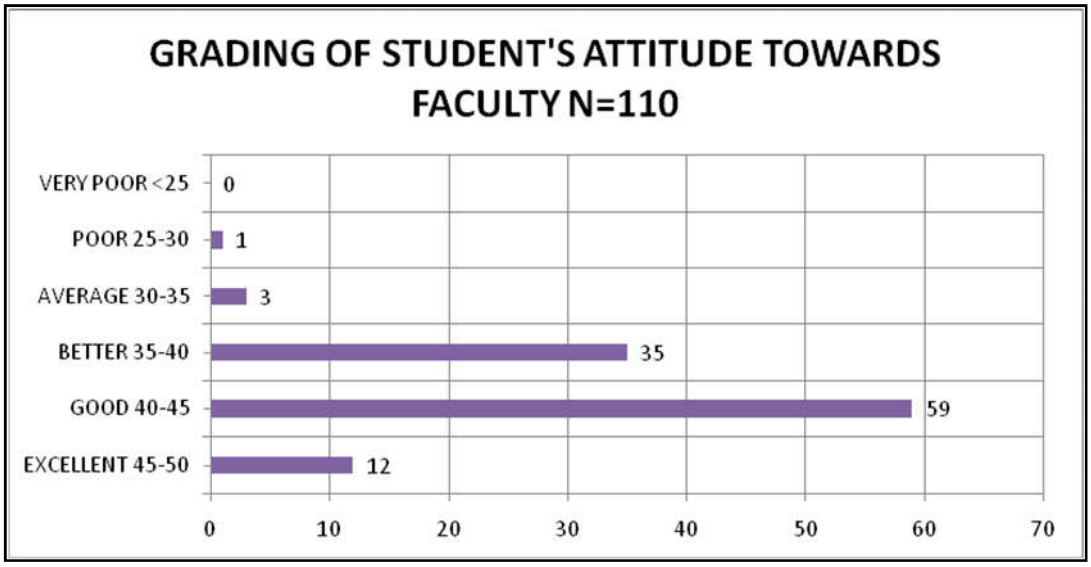
Marks awarded	Categorization of student's attitude towards faculty
45-50	Excellent
40-45	Good
35-40	Better
30-35	Average
25-30	Poor
<25	Very poor

(Maximum marks: 50 marks. No negative marking)

A total of 106/110 (96%) of the students had expressed that that faculties were on time to the class. Around 89% of the students were satisfied with the faculties teaching skills and 78% were satisfied with motivation skills of the faculty. Only 80% of the students agreed for the good quality of content presented by the faculty during the lecture class. Around 77% of the students remembered the topic of last microbiology theory class. Nearly 96% of the students prefer taking lecture notes in the class. About 11% of the students agreed that they generally sleep during the microbiology lecture classes. And 16% of the students revealed that they were playing in or using cell or mobile phones during the lecture.


Pitfalls of faculty's teachinG METHOD
Total number of students N=110
90
80
70
60
50
40
30
20
10
0
48
24
51
72
81
39
Font size is small
Scolding students in class
Asking questions individually in class
Changing slides rapidly
Too strict
Less use of videos in class


100
90
80
70
60
50
40
30
20
10
0
45
80
78
67
94
90
81
60
49
57
36
56
Reduce the speed of changing slides
Scold less
Add videos
Chalk and talk
Friendly rapport with students
Teach more clinical aspects
To share faculty's experience as student
To give time to students to take notes
To ask questions in between the class
To make class more interactive
To finish class within time
Taking class less than 30-40 mins only
Student's suggestion to improve the teaching of faculty Total number of students N=110


GRADING OF STUDENT'S ATTITUDE TOWARDS FACULTY N=110
VERY POOR <25
POOR 25-30
AVERAGE 30-35
BETTER 35-40
GOOD 40-45
EXCELLENT 45-50
0
1
3
35
59
12
0
10
20
30
40
50
60
70

Nearly 17% felt that the classes taken by faculties of Microbiology department are monotonous and boredom. Around 90% students were satisfied with the teaching aids used by faculties to take classes. More than 95% of the students had revealed that the faculty begins a class with a proper introduction, mentioning the desired learning objectives and had fully met the objectives at the end of the class, had finally summarized with few important take home messages and also had asked questions related to the topic taken in the class. Around 91% of the students claimed that the faculty had discussed the clinical aspects related to concerned topic in microbiology during theory classes. Nearly 98% expressed their interest in faculties using a lid-opener or eye-opener in between the class. And about 87% of the faculty used audio-visual aid like videos to facilitate their learning process. Nearly 30% of the students reported that the faculty's interaction with the students during class were poor. All the students agreed that the faculties were audible while taking class. Only 75% of the faculties maintained eye contact with the students during the class.

DISCUSSION

This is a novel study conducted for the first time in this part of southern India targeting medical student's attitude towards the efficiency and characteristics of a teaching faculty. Not many research studies were found elsewhere on this topic. In the study, there was a mild female preponderance in sex distribution among 110 study participants. About 98% of the students expect the teaching faculty to be a friendly facilitator. Only 76% of students felt that they were treated as adults by the faculty. And 90% of students felt that the linguistic skills of the faculty were better. Nearly 89% of students stated that the teacher's proficiency was good and 78% were satisfied with the faculty's motivation skills. And 72% of students felt that the faculty's classes were interesting to listen which has to be taken into consideration for possible areas of improvement in teaching students. The lectures has to be well prepared by a faculty before taking class and a proper visual aid to be used meeting the expected standards should also be prepared by the faculty prior to the class. More updates and recent advances concerning the topic have to be highlighted and the students have to be motivated to attend the class by making it more interesting than ever. Treating students as adults would help the faculty to gain trust from the students and being a friendly facilitator will pave way for an in-depth bond and active interaction between the student and a teacher which would enhance the impact of knowledge imparted to the students and thereby will reduce the stress of students providing a serene learning environment. Nearly 95% of students were interested to receive the teaching material as soft copy or as printed hand notes one week before class. And around 97% of students expressed that the faculty should ask more questions in the class to kindle the interest and enhance the inquisitiveness of the students and also to inculcate clear ideas about the subject by clearing risen doubts. Nearly 90% of students liked the power point design used by the faculty during lectures. Only 84% of the students agree that the faculty comes thoroughly prepared for the lecture class. Nearly 75% of students felt that the faculty had not given enough time for taking notes as the faculty is changing the slides haste fully which may be due to time constraints. Around 83% of students are convinced with the content presented by faculty during the lecture classes. Approximately 67% of students agree that the teaching aids used by faculty were good. Pitfalls of faculty during teaching as described by students in descending order are Strictness, Rapidity in changing slides, Asking questions pointing individuals, Use of small font in power points by faculty and insulting or scolding students in public, Less use of topic related videos, Not treating students as adults, Not being a friendly facilitator, monotonous lectures (Bakhtiyar and Norouzi, 2013; Rathnakar *et al*., 2010; Barr and Tagg, 1995) and etc.

Student's suggestion to improve faculty's teaching were (Blackburn and Lawrence, 1995; Ethington, 1997; Edison *et al*., 2002; Kuh, 2001; Costa *et al*., 2007) i) to maintain a friendly rapport with students, ii) to teach more clinical aspects of the concerned topic, iii) to use the technique of chalk and talk then and there, iv) to complete the lecture class within 30-40 minutes, v) to reduce the speed of changing the slides in the class, vi) to interact and ask questions in between, vii) to finish the class within the stipulated time. A proper and periodic Medical Education Technology (MET) training for Medical faculties suggested by Medical Council of India is the key to improve the teaching methods and to tackle the barriers set against effective teaching by the faculty. Motivation skills, Faculty's proficiency training, communication skills, quality of teaching aids, interactive teaching techniques like microteaching, small group teaching, Large class dynamics, Higher order cognitive strategies, knowledge imparting lecture skills and Personality development programs for faculties of Microbiology department could be obtained under the expert guidance of properly functioning Medical education Unit should be made compulsory. More Small Group Teaching (SGT) and discussions among faculties of same department and or neighboring departments will constantly improve the teaching abilities of a teacher. Nevertheless observer bias always exists in faculty-student assessments which could be resolved by regular and effective monitoring by various faculties of various departments at different circumstances. The process of lecture based learning (LBL) though passive, can be made active by interactive teaching modalities for the benefit of both teachers and the students and the environment has its own impact by regulating the effectiveness of learning by a medical student.

Conclusion

To conclude, faculty of Microbiology department had utilized the essential elements of a theory class in terms of content, language, teaching material used, inspiring students and imparting knowledge. The overall attitude of medical students towards the teaching faculty taking didactic lectures was good but continuous monitoring of faculty and student performance by means of periodic assessments is mandatory. Moreover the present MBBS curriculum though effective, can influence the study results in any way because of its subjective bias. The final mission of every faculty in a medical college is to produce a skillful and knowledgeable Indian Medical Graduate (IMG) which is a certainty. The student's perception regarding pitfalls if teaching faculty must be given importance and can

be rectified without hesitation in order to carve out faculty's agility and attitude to become 'a undoubted role model' for every student and other faculties in the medical college. A multifaceted, complex, scope inclusive, constructive and dedicated approach for reforming excellence in medical education has now captured the attention of medical faculties and pioneers which has revolutionized the field of medical education. In spite of tremendous criticism about teaching techniques and already existing medical curriculum, there is a growing demand for vibrant medical educators and effectively functioning Medical Education Technology Department to improve the teaching methods of a faculty for a better learning by the student invariably existing in every medical college all over the country. A *'Medical Faculty Reward Committee'* confronting the mythology should be established to honor and to further motivate a highly productive and efficient teaching faculty excelling in their respective fields.

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