A Qualitative Study on Factors Associated with Low Academic Performance among Medical Students

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Abstract

Introduction: To ensure optimal quality of health care for the community, it is important to produce an efficient primary care provider. In order to attain this quality we must ensure that all students achieve the required standards. In spite of pre-set prescribed standards, the academic performance varies among medical students.

Objectives: 1. Describe the factors affecting the learning of medical students. 2. Explore the possible solutions to improve their academic performance.

Materials and Methods: A total of 18 students and 12 faculties participated in the study. Among them, five Focus Group Discussions (FGD) were carried out (three FGDs with students and two FGDs with faculties). The discussion was guided by a facilitator and audio-recorded. Information from the audio was transcribed.

Results: Factors affecting learning include content of the class, class schedule, attention span, assessment pattern, audio-visual aids, level of integration of classes, ability of the teacher and teaching learning methods used. Solutions include field visits, hands-on training, appropriate use of audio-visual aids, integration of classes, active participation in research, communication with peers, strict maintenance of attendance and motivation of the students, etc.

Conclusion: Addressing all the factors hindering the learning process by incorporating solutions suggested by faculties and students may help the learners to improve their academic performance. It is important to teach the topics with its practical application with an appropriate assessment pattern.

Key-words: Academic performance, Medical students, Focus Group Discussion, Assessment, Communication, Integration.
teaching for undergraduate medical students. In a focus group discussion, many students have felt that the volume of the subject made the learning difficult. Quality of medical education is also very important for learning. A study by Dipta Kanti Mukhopadhyay revealed the quality gaps to be in the areas of physical facility, educational and audio-visual aids and appearance of the faculty members. Lack of motivation was found to be a significant negative factor affecting the Grade Point Average. Regular sleep positively correlated with academic performance. Hence this study is needed to explore the experiences of the students and the teachers.

The objectives of the study were to describe the factors affecting the learning and to explore the possible solutions to improve the academic performance of students.

**Methods:** This study was undertaken using the exploratory study design. Focus Group Discussion (FGD) was conducted with students and faculties of our college in the Department of Community Medicine during Oct 2017-Feb 2018. Participants were third year undergraduate medical students and faculties of KAP Viswanatham Government Medical College (KAP VGMC), Trichy, Tamil Nadu, India.

Purposive sampling technique was used. Students with low academic performance, high achieving students and faculties were included. A list of all the third year medical students, their attendance of the last six months, and their last three internal marks were obtained from the Department of Community Medicine. From the list, students with low and high attendance as well as faculties were called to take part in the study. Separate FGD guide for faculties and students was prepared after an In-depth interview with few faculties and representatives of exam going batch students. Faculties of KAPVGMC, Trichy from various departments in first, second, and third year subjects were called to take part in the FGD. The time and place of the discussion was decided after consulting with the participants. Totally, two FGDs with faculties and three FGDs with students were conducted by the facilitator in a non-threatening environment with six participants in each Focus Group Discussion. The discussion was guided by the facilitator and also audio recorded. Each FGD lasted for 45-75 minutes. The end point of the FGD was attained upon getting repeated information from the discussion. Refreshments were served at the end of each group discussion. All the participants were informed individually about the study result.

**Data analysis:** Information from the audio was transcribed for analysis. Data analysis was done manually using thematic analysis method.

**Ethical clearance:** Ethical clearance was obtained from the Institutional Ethical Committee of KAP Viswanatham Government Medical College, Trichy. Informed written consent was obtained from each of the study participants before the start of the discussion. Strict confidentiality was maintained throughout the study.

**Results**

**Study subjects:** Of a total of 150 students, 22 students were eligible to take part in the study. Out of the 22 eligible students, only 18 consented and participated in the study. A total of twelve faculties participated in the study.

**Results of focus group discussion:** Students and faculties discussed about the perceived factors affecting learning among the students and their suggestions to improve the same. These factors and solutions are described under various heading below;

1. **Content of the class:** Students are expecting to learn a variety of cases and not be restricted to a few exam cases. They also expressed a desire that the teacher focus more on the most prevalent and common diseases. It was suggested that the number of integrated classes to be increased as this would give more opportunity to learn about a condition in a shorter period. Also the integration would help them to have better clinical orientation while learning Pre and Para clinical subjects. Even in the theory classes, the discussion should be more case or problem oriented. Hands-on experience is needed wherever applicable. Students feel that they learn better when they have more field visits and hands-on-training.

2. **Class schedule:** Clinical postings are started from the second professional year onwards. They are divided into batches to attend the various clinical postings. Students prefer that postings of exam related subjects be assigned just prior to the university exam.

3. **Attention span:** To improve the attendance, it was suggested that sessions may be modified to suit the attention span of the students. To achieve this, interactive lectures may be introduced. One hour theory class may be reduced to forty minutes and the remaining time may be utilised for active interactions with the students. To make the teaching student centric, it is important to assess the needs of
the students. Creative teaching will help the students to be attentive throughout the session. It was felt that sometimes a change in environment from a typical to informal lecture hall for theory classes would be beneficial. Instead of including all the points in a topic, considering only the important aspects of the topic will increase the attention span. Focussing on common problems will arouse interest among the students.

4. Assessment pattern: There should be a change in the assessment pattern to make it more competitive. Apart from the knowledge component other domains like skills, attitude & communication have to be assessed at the undergraduate level. To achieve this we should have a variety of assessment instruments to address all domains of learning like-Multiple Choice Questions, Problem solving exercises, Objective Structured Practical Examination, Objective Structured Clinical Examination, Direct Observation of Procedural Skills, etc. Undergraduate scores may be utilised for further career progression like for postgraduate entrance. This will motivate the students to perform consistently. Faculties suggested that the use of problem solving questions may be increased to enhance the deep learning among the students.

5. Audio-visual aids: Correct usage of audio-visual aids by the faculties is essential to deliver the content. Repeated use of the same PowerPoint will reduce the interest of the students. It is mandatory to update the PowerPoint with necessary changes according to the previous experiences and latest guidelines.

6. Integrated teaching: It is important to teach the basic medical sciences along with the corresponding clinical subjects to enhance learning. Integrated teaching is one such way to incorporate the clinical aspects of a disease with the Pre clinical and Para clinical subjects. Clinical orientation can promote better understanding of pre and Para clinical subjects.

7. Teachers training: There should be some parameters to enhance the ability of the faculties. All the teaching faculties in the medical college may be given an induction training in Medical Education Technologies through Faculty Development Programme while joining the institution. Since teaching faculties are required to have a post-graduation degree it will be more appropriate to incorporate this training in the postgraduate curriculum. Sometimes it may be interesting to introduce performance assessment for the faculties by their peers.

8. Mentorship: The faculties are of the opinion that mentorship programmes may be strengthened to improve the student-teacher relationship. Giving students an opportunity to share their difficulties will help them to overcome their problems. Regular mentorship programmes will help them to be better focused on the day to day learning and will help avoid any deviation because of peer pressure and poor guidance.

9. Training / teaching methods: Faculties and students feel that some subjects are monotonous and require adaptations in the teaching methodologies. Along with chalk and board and PowerPoint teaching, other methods like sharing of materials, flipped class and e-learning may be added. Faculties strongly feel that for many reasons students dislike the use of PowerPoint. Regarding the content of the class, more focus may be given to practical topics and we must not attempt to teach the entire topic. Case oriented teaching / problem oriented teaching / practical application is required in many places. Hands-on training is needed wherever applicable. Student-patient interaction has to be taught. Interactive teaching methods may be used to break the monotony and increase the attention of all students. Students should be made aware about their role in learning.

10. Research activities: In the current system, there is less funding and opportunity for medical research for both students and faculties. Sources of funding may be increased to improve the research activities especially among the students.

11. Communication skills: As suggested earlier, it is important to improve communication skills among the medical students who are future doctors. This may be strengthened by increasing the student-patient interactions. Implementation of the Attitude, Ethics and Communication module suggested by the National Medical Commission will enhance the communication skills. Personal enhancement training may also be given to the students.

12. Attendance: To encourage consistent performance of the students, attendance of the students can be verified regularly. Punching may be introduced so that the administrators can monitor the attendance at any time.

13. Motivation of the students: Students are from various socio-cultural and economic backgrounds. Healthy interactions between the students and
frequent student-teacher interaction will help them to remain motivated.

**Discussion**

Integrated classes give clarity of subject to the learner. The prevalent infectious and non-communicable diseases in India could be selected, and integrated classes or mini exhibitions of one day duration can be conducted involving all the concerned clinical and Para clinical departments. This method will also convey to the students the importance of the topic and hence ensure that they pay extra attention to it. In a study by Sharma P et al., it was found that the majority of the students (80.4%) agreed that integration of topics helps in improving the understanding. Students can also participate by preparing flipcharts, models, etc. which can be used as teaching aids.

Clinical postings can be scheduled according to exam going students’ priorities as flexibility in preparing the schedule is given to the individual colleges. Attention span of students depends on how much importance the learner attaches to the topic. A medical student is more focussed on diagnosis and treatment. Hence in an integrated class these points should be highlighted, followed by the preventive aspects. The relevant Pre and Para clinical subject matter has to be crisp and highly relevant to diagnosis and treatment.

Arousing the learners’ interest in a topic is an art to be practised by the teaching faculty. The induction to the topic of discussion is very important. Those words must make the student recall what he knows already about the topic and identify the lacunae in knowledge that he has. He should be inspired to try to fill those lacunae by paying good attention to the teaching.

Majority of the students perform satisfactorily when they learn in a problem based manner. Problem solving exercises are thought provoking and apt to be used for assessment. By this method the student should be able to put to use whatever he has learnt in all the relevant subjects so far to solve the given problem. The teaching faculty in turn must regularly update the questions given for these exercises by incorporating the newer developments in the medical field.

Audio visual aids especially PowerPoint must be used only to the extent required. Updating the PowerPoint before every class is very important. The same old PowerPoint should not be used, as it will be boring not only for the learner but also to the teacher. In a study by Nirmalya S et. al., in Tripura, it was demonstrated that a mix of audio-visual aids was more appreciated by the students.

Teacher’s training in the form of regular faculty development program is a must for sharpening of skills. Mentorship is successfully followed in many institutions. Not only faculties, senior student mentors also play an important role in shaping the students. As suggested by Bhatia A et. al., formal mentoring programmes may be conducted by trained students and faculties. Volunteer student mentors may be identified and trained. Mentor program at regular intervals may help the students to learn better. As suggested by Devi V et. al., majority of the students (62%) preferred mentored student projects. This will help the students to understand and be able to conduct scientific research. A few long term researches must be ongoing in all departments. Students can be involved in data collection, data entry and also final interpretation of results. This will make them a part of the process, feel useful to the institution and also learn about research.

Communication skills are needed in every walk of life and are useful not only for professional life but for life in general. Students can sharpen their communication skills by interacting with patients to a good extent. Also, good communication skills can be developed by encouraging students to mingle more with their peers through regular recreational and literary activities. Here the students will get a chance to develop respect towards fellow beings and also learn the right use of language. A study by Choudhary A et. al., also found that the majority (78.1%) of the students had a positive attitude towards communication skills learning.

Absence from class was the most common factor related to low academic performance. Biometric attendance systems can be used for students. Students will come to class on time because the biometric will record the time of entry. It is time saving and makes it easy to know the attendance percentage whenever needed.
Appreciation, encouragement and positive attitude from the part of the teaching faculty will help the students to stay motivated. They should be made to realise their goals in life and they should be guided towards reaching the goal. In a study by Wu H et al., also suggested that intrinsic motivation has a larger effect on academic performance. Another study by Yousefy A et al., also observed that motivational factors significantly affect academic achievement. Students perceived that factors like guidance by teachers, frequent class tests, feedback, appreciation from teachers, interactive lectures, integration of topics and problem based learning improves their academic performance.

**Conclusion**

Here we conclude that while teaching, it is pertinent to teach all the topics with their practical applications. Interactive teaching-learning techniques will enhance academic performance. It is also vital to make necessary changes in the assessment pattern. The recent implementation of Competency-Based Medical Education by the National Medical Commission will help medical students to learn better and improve their academic performance.

**Source of funding:** Nil

**Conflict of interests:** Nil

**References**