

Research Article

Student participation in curriculum designing and evaluation in clinical Biochemistry

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Abstract

Background and objective: Medical biochemists are of opinion that a thorough reorientation of the curriculum, methods of teaching, assessment and integration with other departments appears to be required to make the teaching and learning of clinical biochemistry need. The curriculum is planned, written and organized by academic and clinical staff with many years of experience as a medical teacher. Medical students, through experienced from their own education, they are able to give advice on student resources and facilities and are in a favourable position to judge the aspect of curricula. Herein we report a survey of 350 medical students regarding their assessment of the current curriculum of medical Biochemistry.

Methods: The questionnaire was offered to students who were about to complete their first year MBBS. A total of 350 responses were received. A data base, using dbase III+ was generated, using the responses.

Results: 285 (81.4%) students felt that the teaching of medical Biochemistry at present is too theoretical. All students felt that practicals were very necessary for learning and understanding the subject. 254 (72.5%) liked the use of blackboard over the power point presentation as aid of teaching.

Conclusion: The way medicine is taught and learnt has undergone tremendous metamorphoses over the past few decades. It is well established that the students have ability to evaluate the efficacy of their own course. Therefore medical curriculum should be designed with student priorities as one of the major factors to be considered and with active participation of students at each and every stage of its designing and implementation.

Keywords: Medical Biochemistry, curriculum, clinical relevance, integration

1. Introduction

Biochemistry by definition is the science of basis of life. It has great impact on the understanding and maintenance of health and the understanding and effective treatment of diseases.¹ The advances in the field of Medical Science is simply overwhelming and obviously, biochemistry occupies the central place in this endeavour. Throughout India, same curriculum is followed, with new centres, often adopting the older medical college's curriculum. Teaching of biochemistry presently followed in Medical Colleges deals, generally with the chemical and structural details of biomolecules and their metabolic fate. The scope for the student to understand the molecular basis of different clinical conditions is limited. Conventional lecture-based teaching plays a major role in teaching biochemistry in the first year of the undergraduate medical course in India.² Delivery of a lecture by a teacher does not actively engage the learners.

Medical biochemists have often felt that the training regarding the use of various biochemical investigations and

laboratory tests in relation to diseases is inadequate during undergraduate medical teaching. So the fresh medical graduates are often confused regarding the correct use of laboratory facilities for various clinical conditions.

It has been felt that a thorough reorientation of the curriculum, methods of teaching, assessment and integration with other departments appears to be required to make the teaching and learning of clinical biochemistry need based. Though writers of the curriculum are experts in their fields, students through the experience from their own education, are able to give advice on students resources and facilities and are in a favourable position to judge other aspects of course content and assessment. Keeping the above fact in mind, the present study was planned at Dr. Vasant Pawar Medical College, Nashik, Maharashtra with an aim to elicit the views of medical students to the current curriculum of Medical Biochemistry.

2. Material and Methods

The present study was conducted at Dr. Vasant Pawar Medical College for three years. The questionnaire was offered to students who were about to complete their first year MBBS. A questionnaire containing 25 items each on curriculum and teaching/ learning methods; 14 items on assessment and 12 items on students self portrait was devised. The format used was the Likert's five point scale. For the student self portrait a three point scale was used. At the end, the space was provided and the students were encouraged to write that they felt would help in developing better curriculum. A total of 350 responses were received. A data base, using dbase III+ was generated, using the responses.

3. Results

Out of 350 students included in the study 285 (81.4%) students felt that the teaching of medical Biochemistry at present is too theoretical. 196(56%) students responded that learning the details about various metabolisms is not essential and they were confused by many metabolic reactions. They felt that only few metabolic reactions should be taught. All students felt that practicals were very necessary for learning and understanding the subject and more stress should be laid on this aspect. 201(57.4%) students commented that more stress should given on quantitative estimations. 234 (66.8%) students felt the necessity of more emphasis on recent advances or on rapid and recent diagnostic tests. The entire participants felt that the medical Biochemistry should be taught in close association with clinical situations. 194 (55.4%) students felt that Immunology should be taught along with Medical Biochemistry.

Out of total students participated in the study 254 (72.5%) liked the use of blackboard over the power point presentation as aid of teaching. 315(90%) students recommended the circulation of handouts at the end of lecture to reinforce the topic covered. 290 (83%) students appreciated the tutorials, as it helps in better understanding of the subject.

303 (86.5%) students felt the necessity of continuous evaluation process in which would evaluated at the completion of lecture session. 245 (70%)felt that multiple choice questions (MCQs) is the best method of assessment and MCQ bank should made available for the student. 283 (81%) students felt that more marks should be allocated to practicals than theory.

4. Discussion

In the present study most of the students felt that the current curriculum for medical biochemistry is more theoretical with too much subject matter and the students feel that it must be mugged up in order to get through the subject, which seems to reflect the feeling of students in other parts of the world.³

From the responses of the students it is reflected that practical classes are more effective in understanding the subject. It would appear obvious that the students are looking for maximum correlation between theory and clinical condition. A large number of students felt that they should be trained by presenting real life problem and taught the use of biochemical investigations in various clinical conditions. This truly reflects the same words that any educationist would recommend.⁴

From the responses of the student's it would be evident that the current curriculum being more theoretical the students forget even the basic steps about transportation of the samples when they become doctors. Traditional lectures often suppress critical thinking and fail to address differences in student learning styles. They rarely put knowledge into practice and students are passive recipients.⁵ The way medicine is taught and learnt has undergone tremendous metamorphoses over the past few decades. Pedagogy or textbook based teaching or teacher-centred learning is gradually being replaced by student-centred learning.⁶

The teaching of the subject in close association with clinical situation is therefore the need of the hour. Involvement of students in planning and evaluation of curriculum is not a new concept.^{7, 8} It is well established that the students have ability to evaluate the efficacy of their own course. Therefore it can be concluded that medical curriculum should be designed with student priorities as one of the major factors to be considered and with active participation of students at each and every stage of its designing and implementation.

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