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ACQUISITION OF KNOWLEDGE OF BASIC SCIENCES IN DENTAL STUDENTS

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ABSTRACT

Introduction: Success of undergraduate students depends upon the teaching programs with the basic planning and modulating of the study. To achieve the goal of betterment of students we should communicate and incorporate the preference and mode of teaching them as per the syllabus and must know areas.

Though a lot of verbal and nonverbal feedback is conveyed to the teachers but much of work is not published, this inspired us to undertake this study. This study was done with the aim of 3rd year students getting oriented and correlate basic sciences (Anatomy & Physiology) with clinical subjects for better understanding of disability and disease process. Students are in the best position to comment on the effectiveness of any teaching system, judge and assess the teaching process.

Methods: The present cross sectional study was conducted by department of Anatomy and Physiology at a Dental institute in, Haryana. The Ethical clearance was obtained from the institute. Out of 100 only 40 students consented and were involved in this study. Revision based classes where Scheduled and held up for students focusing on the clinical and Patho- Physiological topics for example - Congenital heart diseases, Congenital heart failures, Nutrition deficiency, nutritional disorders and sequel of abnormalities in embryogenesis . Feedback forms were given to these students after the classes and later analysed.

Results: Out of 40 students, 22 students require regular classes and benefitted, whole 18 of them suggested more emphasis and revision of subjects. Out of 22 subjects 18 found classes being worth and having a good correlation, relevance and implementation with applied sciences. Out of 40 only 24 students found quality of teaching material being very good, informative with correlation to clinical knowledge.14 students strongly agree and 10 agreed that these classes create awareness among students about important topics. Only 5 students disagreed with these classes for their application and 4 disagreed for their correlation to the clinical topics.

Conclusion: This study thus support that training programe and feedback analysis is a must to understand and benefit the students. This also help the teachers to improve their students performance and get better results. Feed back analysis is must for understanding of students and engaging teachers to get better results from students as well as improve their performance.

INTRODUCTION

It is generally accepted that reviewing and evaluating teaching methods at regular intervals is a must and modification in methods should be done for improvements in undergraduate medical teaching (1,2).Course assessment instruments such as feedback help the faculty to identify the strength and weakness of their teaching and evaluation methods .Success of any teaching programme lies in planning the curriculum and allowing students to gain maximum out of it in a short span of time available.(3)

Hence in developing teaching and evaluation strategies it is important to obtain feedbacks that allow them to modify their methods to need of students (4). Student feedback are primary means used by many programmes to understand methodology ,so it is important to obtain feedbacks from students ,which helps in bridging the communication gap between teacher and students (5) and also allow teachers to modify their methods to meet the need of students.

The students are undoubtly in best position to comment on effectiveness of teaching system and they are regarded as best judges to assess the teaching and evaluation methods. Lectures of clinical conditions are the most important part and parcel of teaching and learning since the ancient times.(6).there are advances in information technology which have given rise to many purposes computer based educational programmes which have transformed the education fundamentally.(7)

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MATERIALS AND METHODS

The present cross sectional study was conducted by department of Anatomy and Physiology at a Dental institute in, Haryana The Ethical clearance was obtained from the institute (IEC-Institutional Ethical Clearance). Out of 100 only 40 students consented and were involved in this study.

These were revision based classes, focusing on important clinical topics like congenital heart disease, congenital heart failures, nutrition deficiencies, carbuncle, sterilization techniques etc. Similarly sequel of abnormalities in embryogenesis, were emphasized and taught to 3rd year students

Feedback forms were given to them (3rd year BDS students), after regularly attending classes of clinical medicine and surgery topics with knowledge of basic sciences subjects. These feedback forms had focused on the following aspects – like positive attitudinal scores were calculated by compiling response to 10 questions,

Table 1 Preference of the questionnaire used to assessing the students.

1	Theoretical knowledge
2	Application of basic science concept
3	Correlation with clinical conditions
4	Relevance of topics
5	Implementation of topics
6	Quality of teaching material was adequately organized
7	Information given in short course was well laid out and easy to understand
8	Able to correlate with the clinical cases on the topics covered
9	Awareness of the topic is included were adequate or not ,
10.	Any Suggestions were in corporate in the study

It was evaluated according to LIKERT SCALE ,ranging from strongly agree to strongly disagree with a score of 1-5.The questionnaire assessed multiple aspects such as theoretical knowledge where it was enhanced or not, applications, correlation, relevance of topics, with there implementation of topics was discussed adequately .The students were instructed to put forward their preferences for the different responses in the feedback that would help them to understand the clinical topics better. The results were expressed in percentages and were tabulated.

RESULTS

Out of 40 students, 22 students require regular classes and benefitted, whole 18 of them suggested more emphasis and revision of subjects.

Out of 22 subjects 18 found classes being worth and having a good correlation, relevance and implementation with applied sciences.

Out of 40 only 24 students found quality of teaching material being very good, informative with correlation to clinical knowledge.

14 students strongly agree and 10 agreed that these classes create awareness among students about important topics.

Only 5 students disagreed with these classes for their application and 4 disagreed for their correlation to the clinical topics.

This response was analysed to see what percentage of students favoured incorporation of basic medical subject with pathophysiological subjects.

Suggestion given

S.No	Suggestions/comments of students
1	Lectures to be more interesting and enjoyable
2	To help in Better understanding of concepts by faculty
3	More horizontal integration topics among all subjects of basic sciences
4	Tutorials to be kept more than lectures

DISCUSSION

Didactic lectures have their own limitations as Listener are passive receivers of the materials in lectures, loose interest, boredom, and sleep. Many different methods are popular among them like use of audio-visual aids which gives clear picture, memorable and understandable for undergraduates. (8**)** Dental students require more acquisition of a certain amount of clinical with basic science knowledge and skills too. Traditional lecturing has lead to low grades, unable to hold student's attention through the teaching session (13) Undergraduate students learning with clinical applications, is a result of interaction of students, characteristics, availability and engagement of clinical teachers with them .(10)

At the undergraduate Dental student level, clinical Subjects like General Medicine & General Surgery is a must to be taught and should be vertically integrated with the basic Science like Physiology and Anatomy .Students perceptions about the educational methodology are useful for modifying and improving the knowledge. (4)

The results of present study reveal that students are satisfied with the present teaching methodology consisting of revision cum self study, lectures, tutorials and demonstrations. (22students out of 40)

Students were benefitted with the regular revision classes (22students out of 40). Results also showed that student found classes being worth and having a good correlation, relevance (18 students out of 22) and implementation with applied sciences. These classes were found to be very informative, and established a good correlation to clinical knowledge. Applied aspects of physiology and anatomy are taught along with every system and also covered in vertical integrated seminars in our institution.

Our study was supported by Abu-Hijleh, which indicated students overall achieved satisfactory learning outcome during the study of CVS in the problem based integrated curriculum at AGU. The study also points out issues where improvement and fine tuning of educational system can take place.(13)

Similar study was done by BERK et al in 2013 based on information from multiple sources and information gathered and interpreted to have a valid teaching evaluation(11).

Another study of Ali Haqwi & Wael S Tahain (2010) suggested that practical clinical experiences should be introduced early and integrated within the undergraduate curriculum. Organizing the clinical teaching of undergraduate students to involve all possible training sites and utilizing the innovative teaching will enhance the learning outcomes and

reduces the negative impact of health care delivery systems.(10)

Students perception about the educational methodology are a useful basis for modifying and improving the quality of educational environment. Continious improvement of quality of education and innovation are essential of medical education. It helps in making subject more interesting for students and help in better understanding as well as better memorizing of subject. Thus to know and identify areas of strength and weakness of methodology feedbacks are essential. (1).

RESULTS TABLE

Statistical analysis of feedback questionnaire (n=40).

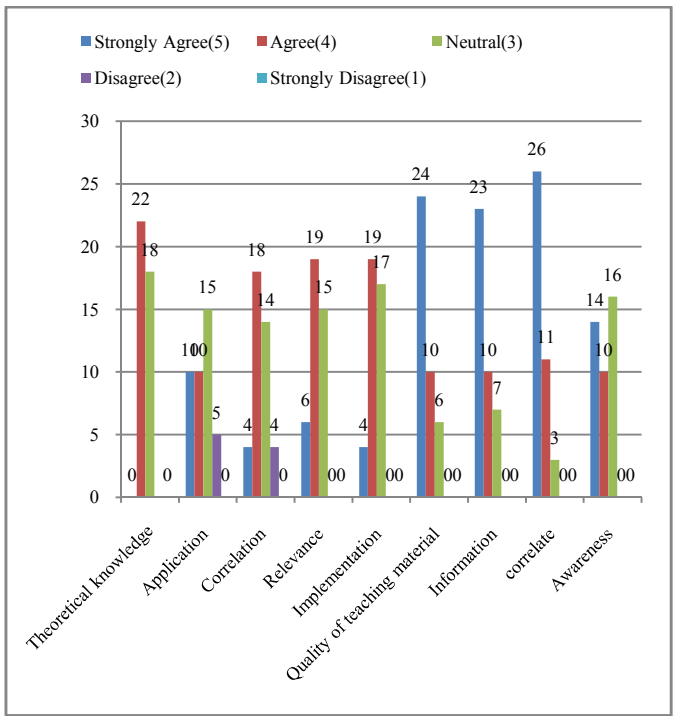
Sl.no	Feed back Questions	Strongly Agree(5)	Agree(4)	Neutral(3)	Disagree(2)	Strongly Disagree(1)
1	Theoretical knowledge	0	22	18		0
2	Application	10	10	15	5	0
3	Correlation	4	18	14	4	0
4	Relevance	6	19	15	0	0
5	Implementation	4	19	17	0	0
6	Quality of teaching material	24	10	6	0	0
7	Information	23	10	7	0	0
8	correlate	26	11	3	0	0
9	Awareness	14	10	16	0	0

10. Any Suggestions were in corporate in the s10tudy

Individual scale value for each item was added and median was calculated.

Table 2 Percentage of the score reported by the students

	Strongly agree	Agree	Neutral	Disagree	Strongly disagree
Theoretical knowledge	0	55%	45%	0	0
Application of basic science concept	25%	25%	37.5%	12.5%	0
Correlation with clinical conditions	10%	45%	35%	10%	0
Relevance of topics	15%	47.5%	37.5%	0	0
Implementation of topics	10%	47.5%	42.5%	0	0
Quality teaching material	60%	25%	15%	0	0
Information easy understand	57.5%	25%	17.5%	0	0
Able to correlate	65%	27.5%	7.5%	0	0
Awareness	35%	25%	40%	0	0



CONCLUSION

This study thus support that training programme and feedback analysis is a must to understand and benefit the students .This also help the teachers to improve their students performance and get better results.

Feed back analysis is must to understand and benefit the students and engaging teachers to have better results and improve these students performance.

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