

Lecture as a Mode of Instruction in Undergraduate Medical Education

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Pages with reference to book, From 30 To 33

Abstract

Objective: This study was carried out to determine the place of lecture as a mode of instruction in undergraduate medical education by examining the views of the students about some selected aspects of the lecturing sessions and their ability to recall the varying percentages of the content of the delivered lecture after a specified period of time.

Methods: An observational cross sectional study was carried out in which the final year students of Fatima Jinnah Medical College for Women, Lahore belonging to sessions 1995-1996 and 1996-1997 participated. The study comprised of two parts; first was administration of a questionnaire containing the questions regarding students' opinions about the lectures attended, duration of lecturing sessions and comparison between lecture and clinical classes. The second part consisted of two surprise tests examining the ability of the students to recall the subject taught in a particular lecture after one week and one month intervals.

Results: According to 74% students lecturing sessions were not beneficial. Only 12% students remained attentive throughout the lecture their reason being ineffective and boring presentations and 55% participants wanted the existing duration of the lecture period to be halved. Clinical sessions were considered to be superior by 79% respondents. About 34% to 35% students could recall more than 50% of the content of the delivered lecture after one week and 20% were able to do so after one month.

Conclusion: Consideration should be given to the feedback received and follow up studies should be carried out so that appropriate changes in the curriculum could be induced in order to ensure the effectiveness of the lecture and to avoid wastage of resources and time and to justify the place of lecture as a mode of instruction in undergraduate medical education (JPMA 49:30, 1999).

Introduction

Lectures remain the most popular form of teaching although a lot of criticism has been raised against the effectiveness of the lecturing sessions particularly in the context of educational objectives to be fulfilled. This problem has been further compounded due to remarkable electronic revolution. Presently computer assisted teaching programmes in various disciplines of medical education are being used effectively and have been found to be quite valuable¹. Rapid and constant development and innovation in software technology resulted in the application of Windows-based software for learning the basic science aspects and clinical scenarios and complemented the traditional modes of teaching medicine very effectively².

To maintain the credibility of the lecture as one of the important teaching tools due consideration should be given towards its organization and preparation and skillful presentation. Success of lecturing sessions is inextricably linked with the excellent teaching process. Medical educationists must review the place of lecture in relevance to the general objective of medical education that is to produce a physician capable of delivering appropriate health care. Feedback from the students must be examined with great deliberation by the faculty members and the people involved in curriculum development because effective feedback plays a critical role as far as adult learning process is concerned³. This study was undertaken to determine the place of lecture as a teaching tool by examining the views of the

undergraduate medical students pertaining to the subject under discussion and to assess the effectiveness of the presented lectures by their ability to recall the contents of the delivered lectures.

Subjects and Methods

An observational cross sectional study was carried out to determine the place and effectiveness of the lectures as a mode of instruction in undergraduate medical education. The study population comprised of two groups, group I consisted of 151 students of the final year class of Fatima Jinnah Medical College belonging to the session 1995-1996 and in group II there were 147 girls belonging to the final year class of the session 1996-1997 of the same institution. The study period extended from May, 1996 to September, 1997. Students who were at the end of their course and training of M.B.B.S. were selected because their opinions would be based on the five year experience of attending the lectures in a medical college. The study comprised of two parts, in the first section opinions and observations of the study population about the delivered lectures were recorded through the administration of a questionnaire prepared keeping in mind the aims and objectives of the study. The questionnaire contained questions regarding the students' general impression about the presented lectures, whether the duration and number of the lecturing sessions should be decreased or not, partial or total replacement of these sessions by clinical classes, comparison between clinical and lecturing sessions, benefits gained by attending the lectures and degree of attention paid during the presentations. The participants of the study completed the questionnaire voluntarily during the scheduled class time. The second part included two surprise tests. Contents of the test were relevant to the subject presented in a particular lecture attended by the students one week and one month earlier respectively. These tests were administered to determine how much of the delivered lecture could be recalled correctly by them. In the test given after one week in group I, 129 girls out of the 151 who attended the lecture participated and in group II 123 students took the test out of the 147 who were present in the lecture, the corresponding figures for the second test were 123/151 and 118/147 respectively. Data collection and presentation were done by analysing and interpreting the collected responses and the results of the surprise tests.

Results

Of the 298 students who participated in the study, 224 (75.17%) regarded a lecture as a poor or useless mode of teaching resulting in both the wastage of time and resources. In response to the question whether they were benefitted or not by attending the lectures only 77 (25.84%) participants said that they found these sessions quite beneficial and rest of the 221(74.16%) admitted that they were unable to learn and gain knowledge adequately through the delivered lectures. Students' opinions regarding the advantages of the lecture sessions included increased theoretical knowledge voiced by 84 (28.19%) respondents, provision of comprehensive details about a particular topic or subject 68 (22.82%), giving guidelines 74 (24.83%), ability to recall the taught material at appropriate time 62 (20.81%) and providing notes which would help for the preparation of the theory part of the examination said by 53 (17.79%) students. Most of the respondents agreed that effectiveness of the imparted lectures was governed to a large extent by the factors like topic under discussion, presentation of the lecture, ability of the teacher to reach the audience and to use the talents and skills of active learning process. According to 163 (54.70%) students duration of the lecturing sessions should be reduced. They wanted the time period preferably to be half of an hour but definitely not more than 40 minutes; as they were unable to concentrate beyond this limit. When enquired about the degree of attention with which the respondents used to listen the lectures it was found that 36 (12.08%) remained attentive throughout the period, 179 (60.07%) concentrated on the progress of lecture only during the first half and 83 (27.85%)

found it difficult to concentrate at all during the session. Of the 262 students who were unable to remain attentive during the whole period or the later half, 134 (51.15%) did so because the presentation was not done in an entertaining way and no attempt was made to ensure students' involvement, 93 (35.50%) failed to keep track of the progress of session due to excess speed and lack of voice clarity and 35 (13.35%) students used to be so bored that they involved themselves with other activities during the lecturing sessions.

A significant percentage of the participants 212 (71.14%) wanted the lectures to be replaced totally or partially by the clinical sessions or demonstrations. When enquired about the clinical sessions in depth 234 (78.52%) students declared them more effective as far as learning was concerned, 48 (16.11%) thought both were same and 16 (5.37%) found them less useful. Students' views regarding advantages of the clinical sessions were increased chances to learn about clinical and applied aspects of the subject under discussion, improvement in clinical approach and orientation, more opportunity for active learning process because of students' participation, easy to concentrate as clinical classes tend to be more interesting and attention to individual member of the class was assured due to small gathering, helpful to clear the concepts and to remove the ambiguities due to detailed discussions, increased ability to retain imparted knowledge and to recall it when required and assurance of gaining confidence and ability to work as future physicians. Clinical sessions were not found to be superior by 64 (21.48%) students, the reasons being less area of subject was covered in a specified time and there was also wastage of the time of the students specially when allocated period not utilized properly, theoretical aspect not taught earlier, cases not notified before so that students would have come prepared for active participation and sessions being conducted by junior doctors instead of professional staff. Results of the surprise tests conducted showed that about 34% to 35% students could recall more than 50% of the contents of the delivered lecture after one week and around 20% could do so after one month (Table).

Table. Outcome of the surprise tests administered after one week and one month.

Percentage of contents of the delivered lectures Recalled	After an Interval of one week		After an Interval of one month	
	1995-1996 n.=129 No.(%)	1996-1997 n=121 No.(%)	1995-1996 n=123 No.(%)	1996-1997 n=118 No.(%)
Less than 25%	11(8.53)	12(9.92)	52(42.28)	49(41.53)
Between 25% to 50%	74(57.36)	67(55.37)	46(37.40)	45(38.13)
Between 51% to 60%	22(17.05)	21(17.36)	17(13.82)	17(14.41)
Between 61% to 70%	18(13.95)	16(13.22)	5(4.06)	3(2.54)
Above 70%	4(3.10)	5(4.12)	3(2.44)	4(3.39)

Discussion

About 75% of the students regarded lecture as a poor and useless mode of instruction. A small section of the participants found the lecturing sessions beneficial but their reasons were not quite relevant to

the broad objective of medical education that is to produce doctors with the capability of providing appropriate health care to the population and to make them strongest pillar of health care delivery system⁴. Unless the criteria of effective lecturing sessions are fulfilled the learning objectives would not be achieved. Success of lectures depend on the ability of the presenter to captivate the undivided attention of the audience by learning and developing basic lecturing skills. To ensure success and quality of the lectures strong organization and adequate performance of the presenter must be assured⁵. Almost 55% students wanted the present duration of the lecture period (one hour) to be decreased preferably 50% reduction. Very small percentage of the respondents (12%) were able to follow progress of lecture till the end. Instead of blaming the students entirely proper steps should be taken to rectify this problem to prevent wastage of time of both the learners and teachers and involved resources. Full and proper attention of the audience could be guaranteed if the teaching process is excellent and entertaining and principles of active learning process are applied. Around 71% of the respondents wanted the teaching sessions to be replaced by clinical ones totally or partially. Some very valid reasons have been stated by them to justify the clinical sessions more beneficial and relevant to the educational objectives. Research has shown that during clinical classes and demonstration more congenial learning environment could be created by providing help and encouragement and making the sessions learner centred⁶. In order to meet the students' expectations and their learning aims the clinical sessions should be conducted by senior teaching staff members. In a study differences between attending physicians' and residents' teaching behaviours have been noted⁷, Proper feedback plays a critical role to make adult educational programmes effective by providing ongoing attention and reinforcement. Provision of regular feedback based on the effective feedback techniques should be an integral part of the educational planning systems. To guarantee reliability and validity the feedback should be specific, objective and consistent. The aim of the feedback is to encourage discussion between tutors and learners so as to clearly define the goals to be achieved and to provide thought for food for the people involved in curriculum designing and development. This would help to make the medical education learner centred and friendly. It has been shown that credible feedback results could be used to modify teaching strategies according to the learning objectives and available resources⁸. During lecture mostly factual knowledge is presented which is difficult to remember and recall and little attention is given to the development of technical skills and attitudes that present day physician need to in order to accomplish his/her tasks competently and confidently. This aspect should not be forgotten by medical educationists. A study revealed that academic performance of the students taught basic science in a problem based learning curriculum was significantly better as compared to those taught in a lecture based learning curriculum⁹. The opinions expressed by the students and the effectiveness of the lecturing sessions revealed by the outcome of the surprise tests should be considered with great care by the medical educationists. Feedback plays a very important role in helping adult learners achieve their educational goals and reach their maximum potential. More research works should be carried out locally to assess the effectiveness of lecture as a mode of instruction in relation to the specified learning objectives. Appropriate changes in the curriculum should be induced based on the received feedback in order to make our future generations of physicians more competent, confident and at par with dictates of time.

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