



STUDENT'S PERCEPTION ABOUT MODULAR TEACHING AND VARIOUS INSTRUCTIONAL STRATEGIES IN THE SUBJECT OF OBSTETRICS AND GYNECOLOGY.

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INTRODUCTION

In recent past, many modifications have been introduced in the field of medical education. There is a revolutionary shift from traditional lecture based teaching to the use of more interactive, student focused teaching strategies and competency based learning. Didactic teaching model is still the most popular method in many institutions despite its inherent limitation of transfer of fragmented knowledge, passive learning, poor long term retention of concepts and difficulty in practical application in real life situations.^{1,2} Medical educationists have a strong disapproval for conventional teaching methods and many have proposed implementation of more effective strategies to improve critical thinking and problem solving skills of the students.³ Health authorities

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ABSTRACT: Many modifications have been introduced in the field of medical education in recent past with a shift from didactic to more student focused teaching strategies. Modular study system for final year MBBS students was introduced in the subject of Obstetrics and Gynecology in 2018 session. **Objectives:** To determine the students' perception about modular teaching and various instructional strategies through feedback in the subject of Obstetrics and Gynecology at undergraduate level. **Study Design:** Cross sectional study. **Setting:** University Medical and Dental College, Faisalabad. **Period:** 1st January to 30th October 2018. **Material & Methods:** Eight modules were designed in the subject of obstetrics and gynecology for final year MBBS students. In order to ascertain the quality of teaching and to monitor the effectiveness of teaching methodologies, feedback was obtained. A written questionnaire was designed to collect feedback. Interpretation of collected data was performed on SPSS 20. **Results:** Total 136 students participated in study by giving back properly filled questionnaire. Modular teaching was appreciated as an effective method by 93.4% students. Case based teaching, small group sessions and problem based learning were considered most favored teaching methods (97.7%, 97.1% and 94.85%) respectively by the students. **Conclusion:** Modular teaching was found to be an interesting and a useful teaching - learning experience by majority of students. Almost all students showed positive acceptance for various teaching methods. Students' feedback was also useful in identifying course components that need improvement so that appropriate measures can be made to improve the overall quality and effectiveness of the course in future.

Key words: Feedback, Modular Teaching, Satisfaction, Students.

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also recommend that medical training should be based on integration of knowledge, scientific inquiry, analysis and subsequent ability to drive conclusions.⁴ Current challenge is to determine a suitable curriculum and teaching methods which allow better application of knowledge and clinical skills by the medical students.

Self-directed and problem based learning (PBL), small group discussions and mini seminars are popular learning approaches and widely implemented in medical education.⁵ Literature suggests that these methods are associated with better development of cognitive and psychomotor skills of learners.⁶ This is the basis for global recommendation of integration, construction of modules and blended teaching at undergraduate

level in medical colleges. Modular teaching is an instructional method which involves self-directed learning of defined objectives by using different activities. Modules also provide the opportunity to use various interactive modalities which seems to be more attractive to students and facilitate active learner's participation.⁷

The medical training in Pakistan is still in the process of transformation to meet the international standards of healthcare. Local health authorities have highlighted the need to replace traditional classroom teaching with more student focused approaches.^{8,9} However, a few institutions have adopted such strategies primarily due to lack of resources and nominal educational budgets.

Evaluation of any curricular program is essential to determine its effectiveness and students' feedback is an indirect and inexpensive method for this purpose.¹⁰ It is not only important for students but formal students' evaluation of modules can provide an opportunity for the teachers as well, to ascertain the effectiveness of a course.¹¹ In developing countries like Pakistan, formal feedback is neither provided to, nor obtained from students. Therefore limited data is available about students' perception for currently employed teaching-learning methodologies at undergraduate level.

Integrated modular teaching has been well accepted worldwide, however enduring any curricular innovation should be judged by all stakeholders including learners before its generalized implementation. Effectiveness of a curriculum may be evaluated indirectly by student's satisfaction and their opinion about positive and negative aspects of a program. Student's acceptance and readiness is an integral component for successful implementation and future continuation of any curricular change. Present study was all the more relevant because our students were familiar to traditional lecture based teaching and had their first ever experience of modular teaching. This intervention was made in an attempt to identify the students' perspective and to plan appropriate measures for future improvement of the modules.

METHODS

It was a cross sectional study, conducted at University Medical and Dental College, Faisalabad from January 2018 to October 2018 after approval by the institutional ethical committee. A total of 140 students of final year MBBS class were included in the study after informed consent. The curriculum of Obstetrics and Gynecology was designed as eight modules with predefined objectives. Each module was of six to eight week duration depending upon the content to be delivered. These modules were conducted over a period of ten months. Different teaching methods were used to teach the content. A questionnaire was designed to collect feedback. Students' response about content delivery and activities of modules was recorded according to five point Likert's scale rating as strongly agree (score 1), agree (score 2), no response (score 3), disagree (score 4) and strongly disagree (score 5) in section 1 of questionnaire. In section 2, students' perception about process of modular teaching was recorded as three point scale consisting of agree, disagree and no response. Feedback regarding different teaching methods was also recorded as method being useful, not useful and no response.

SPSS version 20 was used for interpretation of collected data. Qualitative variables were calculated as frequencies and percentages. Group means and standard deviations were also calculated. Testing for significance of mean was calculated and test value was 1.82.

RESULTS

Total 140 students participated in this study but only 136 returned back properly filled questionnaire.

Modular teaching was appreciated as an effective method by students. For descriptive purpose, rating of strongly agree and agree was taken as one. Overall, majority of students 127(93.4 %) were satisfied with module delivery and activities of modules (Table-I).

Students were most satisfied by clear learning objectives, organized delivery, relevance of assignments and usefulness of handouts. Table-

It shows participants response for process of modular teaching and educational impact. The ability of developing independent thinking by modular teaching was perceived by 132 (97.1%) participants. Improved teacher-student interaction was well appreciated impact by a significantly larger proportion of students, 129 (94.85%) in modular system.

Regarding different instructional methods (Table-III), small group discussion (97.1%) and case based studies (97.7%) were considered most useful methods of teaching followed by problem based learning (94.8%) and power point presentations (94.9%) by the students.

Variables	Strongly Agree	Agree	Not Applicable	Disagree	Strongly Disagree	Mean ± SD
Learning objectives were clear	N=56 (41.2 %)	N=70 (51.5%)	N=1 (0.7%)	N=2 (1.5%)	N=7 (5.1%)	1.78±0.948
Module delivery was well organized	58 (42.6%)	67 (49.3%)	0	4 (2.9%)	7 (5.1%)	1.79±0.984
There was a balance between teaching – learning activities	59 (43.4%)	66 (48.5%)	2 (1.5%)	5 (3.7%)	4 (2.9%)	1.74 ±0.894
I was encouraged to participate actively in different tasks	58 (42.6%)	64 (47.1%)	2 (1.5%)	5 (3.7%)	7 (5.1%)	1.82±1.013
The handouts were helpful	56 (41.2%)	68 (50%)	2 (1.5%)	6 (4.4%)	4 (2.9%)	1.78±0.908
The workload associated with assignments was manageable	49 (36%)	64 (47.1%)	5 (3.7%)	13 (9.6%)	5 (3.7%)	1.98±1.057
The assignments were relevant	52 (38.2%)	75 (55.1%)	2 (1.5%)	4 (2.9%)	3 (2.2%)	1.76±0.812
I received my grades and feedback within specified timescale	52 (38.2%)	65 (47.8%)	3 (2.2%)	8 (5.9%)	8 (5.9%)	1.93±1.083
The feedback I received on my progress was helpful	53 (39%)	67 (49.3%)	2 (1.5%)	9 (6.6%)	5 (3.7%)	1.87±0.995
The tutors were helpful	60 (44.1%)	64 (47.1%)	2 (1.5%)	7 (5.1%)	3 (2.2%)	1.74±0.894
Overall, I was satisfied with module system	70 (51.5%)	57 (41.9%)	2 (1.5%)	4 (2.9%)	3 (2.2%)	1.63±0.843

Table-I. Students’ response regarding content and activities of modules.

Variables	Agree	Disagree	No Response
Stimulated interest in subject	119 (87.5)	16 (11.76)	1 (0.74)
Improved Teacher student interaction	129 (94.84)	5 (3.67)	2 (1.48)
Development of independent thinking	132 (97.1)	4 (2.9)	0
Preparation for critical thinking	116 (85.3)	16 (11.8)	4 (2.9)
Improved sense of team work	75 (55.1)	60 (44.11)	1 (0.74)

Table-II. Response regarding process of modular teaching N=136 (%)

Variables	Useful	Not Useful	No Response
Tutorials	86 (63.23%)	49 (36.03%)	1 (0.74%)
Small group discussion	132 (97.1%)	04 (2.9%)	0
Problem based learning	129 (94.85%)	05 (3.68%)	2 (1.47%)
Self directed learning	120 (88.2%)	13 (9.6%)	3 (2.2%)
Hands on practice on manikins	122 (89.7%)	11 (8.1%)	3 (2.2%)
Case based learning	133 (97.79%)	01 (0.74%)	2 (1.47%)
Use of group assignments	123 (90.44%)	12 (8.82%)	1 (0.74%)
Use of multimedia and power point	129 (94.9%)	04 (2.9%)	3 (2.2%)

Table-III. Response regarding different teaching strategies. N=136 (%)

DISCUSSION

Although the concept of modules is not new among educationists, still it is not widely practiced in medical institutions of Pakistan. Based on PM & DC guidelines, University Medical and Dental College has introduced the pilot project of modular system for the subject of obstetrics and gynaecology to mark a shift towards more learner focused teaching approach in an attempt to meet the international standards.

Effectiveness of a curriculum depends upon successful educational environment and necessary involvement and enthusiasm of students. In the present study, 93.4% students were satisfied with modular system and the results are supported by a similar study in which majority of students (86.8%) felt that modular teaching was a useful and interesting learning experience.¹² A recent research comparing faculty and students' perception for integrated modules showed acceptance rate of 93% which is very close to our findings.¹³ Many studies attest that modular style is associated with increased brainstorming and focused learning as compared to didactic teaching.¹⁴ Learners can be exposed to various teaching methodologies in modules with positive students' acceptance.⁷

Active learning strategies are not only supported by adult learning theories but local accreditation authorities also demand to redefine medical programmes so that students have an opportunity to develop competencies related to professionalism and medical ethics. Education experts advocate that students are more focused and motivated by learner oriented teaching when compared to traditional methods.¹⁵ Various interactive instructional strategies were used in current study to deliver content and respondents in present study agreed that these strategies increased their interest in subject and stimulated independent thinking abilities with better teacher-student interaction. In a study by Preeti P Yadav and colleagues, 75 % of students reinforce similar findings.¹⁶ Another study demonstrates that active learning modules are associated with better understanding of abstract concepts (77%) and more teacher-student interaction.¹⁷ In a

published research, 94% students reported that interactive sessions facilitate interest in subject and motivate for more study.¹⁸ According to 95% participants of a study, interactive lecture modules were associated with significant improvement in understanding of subject and better practical skills.¹⁹ Many researchers emphasize that interactive environment increases the critical thinking ability and attention span of learner with improved learning outcomes.²⁰

Tutorial is a type of remedial teaching in which individual considerations are taken into account. A study by Shandana Ali Khan and coworkers shows that 72.4% students appreciated tutorials as a useful teaching method.²¹ Although 63% students have appreciated the usefulness of tutorials in the present study, still 36% suggested it as not useful. Majority of students raised concerns regarding unequal teacher attention and poor group management. Large class size in medical colleges is a growing challenge for effective teaching. Dividing class in small groups is considered to be associated with better understanding of difficult concepts and facilitate collaborative learning skills. In present study, a large proportion of students reported that small group discussions (SGD) were very beneficial to build self-confidence. Students opined that small group discussions promote more teacher-student communication which boost to ask questions and explanations. The same have been emphasized by another study in which 62.5% students strongly agreed that small group sessions helped to clear difficult concepts.²²

Problem based learning (PBL) is an educational approach which sharpens students' clinical reasoning and analytical abilities with appropriate application of knowledge in real life situations. In the present study, 94% students had positive attitude for problem based learning and 88% were motivated for self directed learning which is consistent with findings of study by Sultan Ayoub Meo where 80% students were in the favor of PBL.²³ Same results are recorded by other researchers who noted that self-directed learning and decision making skills are improved in PBL sessions by creating an interesting teaching

environment.²⁴ In another study, 86% medical students valued PBL sessions as a very useful teaching strategy.^{25,26}

Case based teaching (CBL) promotes the contextualized learning of students in the background of patients. Students valued this strategy very positively in our study. Case based learning (CBL) is strongly favored by students in many other studies.²⁷

CONCLUSION

Majority of students were satisfied with modular teaching. They positively perceived that process was associated with better understanding of subject and improved concept of team work. This study supports the logical approach that modular teaching strategy can be incorporated effectively at undergraduate level. However further research is needed in this area on local population before its generalized application.





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5	Rizwan Rasool Khan	Proof reading of paper.	