

Perception of Fourth Year Medical Students on Task-Based Learning in Clinical Teaching

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Abstract

Introduction: Clinical teaching has always been challenging. Different teaching strategies are used for effective teaching and learning in a clinical environment. Task-based learning (TBL) is the teaching strategy within which tasks are assigned to the students to promote student-centered learning. We conducted this study to explore students' perceptions about Task-based learning.

Materials and Methods: This descriptive cross-sectional study was carried out for the academic year 2019-2020 in Shalamar medical college Lahore, from January 2019 to January 2020. TBL was used for 4th-year MBBS students for clinical teaching during a clinical rotation in Gynae/Obs, Total of 135 students fulfilling the inclusion criteria were selected by simple random sampling, and at the end of the rotation, they were asked to fill out a questionnaire regarding their perceptions about TBL. Out of 135 students, 87 students participated in the study. Their responses were recorded on the predesigned questionnaire. Frequency and percentages were calculated. A Chi-square test was applied.

Results: All 87 students participating in this study agreed with the effectiveness of TBL pertinent to the acquisition of clinical skills. All the students agreed that TBL is an effective teaching approach, and they have a positive response towards TBL in clinical setting. 85% students said TBL improve communication skills, 89.6% agreed that by TBL they got an opportunity to directly encounter with patients, about 71.2% of respondents perceived TBL a very helpful and informative approach while 40.2% were satisfied with their active involvement in learning.

Conclusion: TBL is determined to be an effective learning strategy among 4th year medical students due to the promotion of student-centered learning, enhancement of communication skills, and provision of the chance to direct encounter with the patients.

Keywords: Task-based learning, Clinical teaching, Communication skills.

Introduction

Clinical teaching has always been complex and challenging.¹ It is essential to make learning an enjoyable process for both student and teacher. Students should use the knowledge and skills they have acquired in class to satisfy their professional goals. The main aim of clinical teaching is to improve students' skills and knowledge, promote clinical independence, and prepare them as competent doctors for the future. In undergraduate teaching, clinical rotation is considered an opportunity where students must learn to apply their theoretical knowledge to patient care. Skills pertinent to history taking, clinical examination, communication, and counseling are best acquired in clinical settings.² During clinical placements, students expect that they will have encounters with the actual patients and learn practical skills in real-life situations. However, during clinical teaching, the emphasis is given by the teacher on imparting theoretical knowledge without considering the need to develop competencies in our undergraduate students. Medical students are adult learners, and adult learning principles must be applied in their training and should be actively involved in their teaching and learning. Different students have different learning styles. Different strategies like case-based teaching, problem-based learning, peer-assisted learning, e-learning, observational learning, team-based learning, and many other modern strategies are helpful for students to broaden their thinking and clinical reasoning. One such strategy is Task-based learning. In order to improve the effectiveness of our clinical teaching for undergraduate students, we tried to incorporate a modified Task-based teaching strategy. Hardens first described Task-based learning (TBL) in 1988.³ In TBL, tasks are identified for the students and are used to learn students. In TBL, the focus for learning is a set of tasks addressed by a doctor in clinical practice. The learning is built around the tasks and learning results, as the student tries to understand the tasks themselves and the concepts and mechanisms underlying the tasks.⁴ In TBL, learning objectives are clear and shared in the beginning with the learners. The subject of the tasks is clinical problems, not scenarios, as in PBL. The goal of the learning task is not only the task itself but the students are expected to learn the concepts and mechanisms underlying their tasks also. Students share the responsibility of learning; the role of the teacher is to provide guidance, supervision, and feedback to enhance learning.⁵ Literature suggests that the benefits

of TBL are: it is a planned and structured training, learning objectives are shared in advance, it allows students to learn while doing, and it motivates learning.⁶

Through participation, new practices are learned, and progressively, new tasks are undertaken.⁷ Clinical learning is the essence of medical education. As clinical teachers, we have a significant role in supporting learners for effective clinical education and the provision of opportunities. The quality of clinical teaching should be maintained through regular evaluations.⁸ Although there is a number of studies available in the literature for different teaching methods, the studies on the perceptions of the students about innovative methods of teaching in a clinical environment are limited.

We conducted this research to explore the perceptions and views of our students about the experience of clinical placement and to find out students' acceptance of task-based learning strategies. Identifying the areas for improvement can be of great help to improve their academics

Materials and Methods

Study setting and subjects: This cross-sectional descriptive study was carried out in the Gynae/obs department of Shalamar Medical and Dental College Lahore during the academic year 2019 to 2020. Students of 4th-year MBBS of SMDC who were completing their clinical rotation in Gynae obs and willing to participate in the study were included. Students of fourth-year MBBS who were repeating the clinical rotation due to failure in the ward test were excluded. A simple random sampling technique was used, and the sample size was calculated by using Rao Soft sample size calculator and Morgans table for sample size calculation keeping 95% confidence interval and 5% margin of error. A total of 135 students of 4th-year MBBS were enrolled in the study.

Ethical consideration: All participants were informed of the study's objectives, Participant anonymity was guaranteed, participation was voluntary, and informed consent was obtained. Ethical approval for carrying out this study was obtained by the IRB Committee of Shalamar Medical and Dental College Lahore.

Data collection tool: A self-administered, anonymous questionnaire was used for the collection of data. The Questionnaire was adapted from the questionnaire used in other similar studies to measure students' perceptions and is modified by the researcher

according to the current study's objectives. Two subject experts validated it, and the pilot study was done with 20 students to determine their responses. The questionnaire had two parts. The first part contained five items for measuring students' perceptions about the TBL approach, and the Likert scale is used for determining response for each item. In the second part, students were asked open-ended questions to write about two strengths of TBL compared to other traditional methods of clinical teaching. Students were supposed to fill in this questionnaire at the end of their clinical rotation.

Data analysis: Data obtained from the students was analysed by SPSS 17, and frequencies and percentages are calculated. The Chi-square test of independence was used to measure the association between different variables. A P-value of 0.05 was considered significant. Results obtained were presented in the tabulated form.

Results

Out of 135 students enrolled in the study, 87 students filled the questionnaire. The overall response rate was 64.4%. (Incomplete questionnaires were not included, and few students were lost from contact due to the lockdown situation). Out of these 87 participants, 35 were males and 52 were females. The mean age of participants is 22 years.

Most of the students agreed with the usefulness of TBL in their academics as illustrated below in Table 1

Table 1: Perception of medical students regarding TBL

Item	Agree	Neither agree or disagree	Disagree
Did TBL learning improve your knowledge about subject	87 (100%)	-	-
Did TBL help you to achieve learning objectives	77 (88.5%)	10 (11.4%)	
Did TBL stimulate your interest in subject	87 (100%)		
Did TBL improve your ability to apply theory in practice	87 (100%)		
TBL is better than	80(98%)	7(8%)	

the traditional way of clinical teaching	
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When we analyzed the students' responses, we used three categories. Agree (strongly agree and agree were merged) neutral (for students' responses those neither agreed or disagreed) and disagree (strongly disagree and disagree were combined).

Table 2: Strengths of the TBL based clinical teaching from student's response to open-ended questions about the strength of TBL

Improve Communication skills	74(85%)
Active involvement of student	35((40.2%)
A direct encounter with the patient	78(89.6%)
Useful and informative	62((71.2%)

Discussion

In our study, all students agreed that TBL is a practical teaching approach and TBL improves their communication skills, interaction with patients, and confidence in dealing with patients. TBL is a valuable method for medical students and helps them make connections in their knowledge, skills, and competencies.⁹ The result of our study is consistent with the results of other similar studies in medical education. The study carried out in Rio de Janeiro also advocated TBL as a powerful educational strategy and engaged them more effectively in applying knowledge to solve real-world issues.¹⁰ Study in Finland regarding the TBL study module for 4th-year medical students revealed that this method works and improves learning.¹¹ A study in Agha Khan hospital to evaluate task-based learning versus problem-oriented lecture in neurology showed both are effective methods, but improved learning is with TBL Group.¹² The TBL programme was adopted for clinical years in 2000-2001 in Dokuz Eylul University School of Medicine Izmir, Turkey.

Based on the experience and feedback provided by the students and trainers, the authors considered TBL a practical and advisable approach for the clinical years of medical education. Their experience demonstrated that TBL, as an alternative educational model for clinical clerkship, facilitated the integration of preclinical and clinical components of the curriculum within a flexible framework, contributed to the acquisition of holistic and interdisciplinary approaches, enhanced student motivation, and satisfaction, and promoted student learning. Based on

the experience and feedback provided by the students and trainers, the authors considered TBL an applicable and advisable approach for the clinical years of medical education.¹³ Good communication skills are essential for the physician, and TBL projects help students acquire good communication skills. Students in our study admired that TBL improved communication skills with the patients but also with each other and teachers. Our study showed that students felt more involved and engaged in teaching and learning when they were assigned tasks, improving their time management. One of the most critical aspects of TBL is that it promotes learners' confidence by providing them opportunities to deal directly with the patients. In clinical teaching, students must learn how to perform in actual life situations. Mangeli et al. reviewed the articles written on TBL and found TBL is a more effective and efficient training method and is recommended as an appropriate tool for promoting knowledge, skills, and professional competency.¹⁴ Clinical teachers are responsible for using the best teaching strategies to train their students for preparedness for the future and use evidence-based, innovative practices to evolve their students to meet the challenges. Teaching in the clinical environment is demanding, challenging, and a frustrating task. It is the environment where students learn what it means to be a real doctor.¹⁵ Education is a dynamic process, and the lack of innovations in teaching strategies makes medical curricula inadequate in making a significant stride towards the future.¹⁶ It is necessary to implement teaching curricula that accommodate modern teaching methods only; thus, we can bridge the gaps between traditional methods and modern teaching methods. It is very much required that teaching methods must be refined periodically. Medical education should be flexible enough to adopt new teaching approaches for better preparation for our future doctors.¹⁷ Clinical reasoning is a vital goal of every clinical rotation; considerable efforts are going on, and numerous innovations have been developed for teaching various aspects of clinical reasoning.¹⁸ To optimize learning, student involvement and engagement are crucial, and learning activities must be planned, structured, and aligned with their curricula. Observing students and providing them feedback helps the students narrow the gap between actual and desired performance.¹⁹ Based on the results of our study, we recommend TBL be adopted as a suitable approach in clinical teaching and learning. For any TBL project, learning objectives must

be clearly defined, and tasks are formulated according to objectives.

Limitations

In this study, we took only the students' perceptions of 4th-year MBBS about TBL. For the future, we recommend other longitudinal studies to take feedback from the teacher about students' performance as well when TBL modules teach them. The response rate is a little less due to the sudden closure of the colleges due to the Covid situation.

Conclusion

TBL is determined to be an effective learning strategy among 4th year medical students due to the promotion of student-centered learning, enhancement of communication skills, and provision of the chance to directly encounter patients.

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