

PERCEPTIONS OF FINAL-YEAR MBBS STUDENTS TOWARD TRADITIONAL CLINICAL TEACHING VERSUS ACTIVE PARTICIPATION IN CLINICAL EDUCATION

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ABSTRACT

Objective: The objective of this study was to gain the perspectives of medical students on two different teaching approaches in clinical education.

Methods: This research was designed as an educational interventional crossover study to compare two clinical teaching methods and assess their impact on students' educational experiences. Conducted at Government Medical College, Pali, the study aimed to evaluate how active participation in clinical rounds versus traditional clinical teaching affects MBBS final-year students' perceptions and learning outcomes.

Results: Active participatory teaching is more effective in promoting student engagement and active learning compared to traditional clinical teaching.

Conclusion: Active participation in clinical rounds significantly enriches students' educational experience and prepares them for practical, patient-centered medical practice.

Keywords: Medical education, Teaching approaches, Clinical teaching, Learning outcomes.

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INTRODUCTION

Medical education is a dynamic field that continuously evolves to align with the demands of contemporary health-care practice. The culmination of a medical student's journey is the final year, where theoretical knowledge converges with real-world clinical scenarios [1]. Clinical teaching, a cornerstone of medical education, offers a unique platform for students to witness the practical application of their learning and to engage with patients directly. Traditional clinical teaching primarily relies on history taking and physical examinations, with the bulk of discussions centered around theoretical aspects. Ward rounds, as a teaching-learning health activity, represent multifaceted tasks needing clinical competence and medical familiarity, but also communication abilities, clinical technical skills, patient management abilities, and teamwork abilities [2]. Ward rounds provide a huge opportunity for inter-professional learning and informal continuing professional development not only for junior doctors in training but also for the entire multidisciplinary team [3]. However, the evolution of pedagogy has prompted a shift toward more active and participatory methods in medical education.

In recent years, there has been a growing recognition of the potential benefits of participation of medical students in clinical rounds. This participatory method, rooted in learner-centered principles, aims to actively involve students in the educational process, fostering critical thinking, decision-making skills, a patient-centered care approach, and a deeper understanding of clinical concepts [4]. This shift from passive observation to active engagement holds the promise of bridging the gap between theoretical knowledge and its practical application, enriching the educational experience for final-year medical students [5]. Active participation refers to students engaging as treating doctors in the provision of patient care under the guidance and supervision of faculty members.

By actively involving students in case discussions, patient presentations, and treatment planning exercises, This exploration into the impact of participatory methods is not only essential for advancing medical

education but also for preparing future physicians to excel in the dynamic and patient-focused healthcare landscape [6]. The objective of this study was to gain the perspectives of medical students on two different teaching approaches in clinical education.

METHODS

This research was designed as an educational interventional crossover study to compare two clinical teaching methods and assess their impact on students' educational experiences. Conducted at Government Medical College, Pali, the study aimed to evaluate how active participation in clinical rounds versus traditional clinical teaching affects MBBS final-year students' perceptions and learning outcomes.

Study design and methods

The study employed a quantitative analysis approach. It was carried out over a period of 56 days, divided into two rounds of 28 days each. In each round, one group of 36 students participated in clinical postings within the general surgery department. The students were split into two groups: Group A and Group B. Each group experienced both teaching methods in a sequential manner with a washout period in between.

Clinical teaching methods

1. Traditional clinical teaching: Students were assigned to a sub-batch where they observed one patient per day, taking history and conducting physical examinations under faculty supervision. The focus was primarily on case discussion and didactic teaching.
2. Active participation in clinical rounds: This method involved direct interaction with patients, where students engaged in case discussions, patient presentations, treatment planning exercises, and decision-making under faculty supervision. Students followed specific guidelines outlined in the annexure for this approach.

Study procedure

The study targeted the MBBS final-year students from the 2019 batch, undergoing their clinical rotations in the General Surgery department.

A total of 72 students participated, divided into two sub-batches of 36 students each.

In the first round, each sub-batch was divided into two groups of 18 students each. Group A experienced traditional clinical teaching for 12 days, followed by active participation for 12 days. Group B underwent the reverse sequence. A washout period of 4 days separated the two methods to minimize any residual effects. The same methodology was applied to the second sub-batch in the following round.

Student perceptions were assessed using a Google Form containing 15 questions, including 14 research-related questions and one for hypothesis testing. The form utilized a 5-point Likert scale to evaluate students' perceptions and satisfaction with each teaching method immediately following their experience. Final-year MBBS students from the 2019 batch who were present during the study period and provided written informed consent were included in the study. Students who were persistently absent or did not consent were excluded. Ethical approval was obtained from the Institutional Ethical Committee of Government Medical College, Pali before the study commenced. The ethical permission document is included in the annexure.

Statistical analysis

Collected data were entered into a Microsoft Excel sheet and quantitative data were expressed as mean, standard deviation, and standard error of mean. Data analysis and interpretation were performed using a 5-point Likert scale (strongly dissatisfied-1, dissatisfied-2, neutral-3, satisfied-4, strongly satisfied-5) for analyzing the responses collected through questionnaires. Further hypothesis testing was conducted through unpaired t-test analysis (by Epi info software by centers for disease control and prevention) to compare the perceptions of students toward both teaching methods, by calculating two-tailed p-value (<0.0001), intermediate value (t), degrees of freedom (df), and standard error of the difference.

RESULTS

Active participatory teaching has shown higher levels of satisfaction and fewer instances of dissatisfaction compared to traditional clinical teaching. The more decisive responses and overall higher satisfaction levels suggest that active participatory teaching is more effective in improving student engagement and understanding of complex medical topics (Table 1).

Active participatory teaching appears more effective in improving communication skills, as indicated by fewer neutral responses, more satisfied, and strongly satisfied students compared to traditional clinical teaching. This method also results in less strong dissatisfaction, suggesting a generally more positive impact on students' communication abilities with healthcare providers and patients (Table 2).

Active participatory teaching is more effective in promoting student engagement and active learning compared to traditional clinical teaching. The absence of neutral responses in the active participatory group indicates clearer opinions, with a majority expressing satisfaction and strong satisfaction with their participation and involvement. The

data supports that active participatory teaching enhances student engagement and involvement in the learning process.

Active participatory teaching appears to enhance teacher-student relationships more effectively than traditional clinical teaching. The absence of neutral responses in the Active Participatory group and the higher satisfaction ratings indicate that this method fosters better communication and stronger relationships between students and instructors. Traditional Clinical Teaching, while showing some improvement, still faces challenges related to communication and rapport, as evidenced by the significant number of neutral responses (Table 3).

Active participatory teaching seems to offer a more engaging approach for connecting theoretical knowledge with real-world applications and fosters clearer opinions among students. However, both methods face challenges in addressing student concerns and could benefit from further adjustments to enhance the medical curriculum.

Traditional clinical education and active participation clinical teaching differ in long-term information retention and insight growth, according to studies (Fig. 1).

Active participatory teaching appears to be more effective in improving students' perceptions of patient care and satisfaction compared to traditional clinical teaching. The absence of neutral responses and the higher levels of satisfaction and strong satisfaction in the Active participatory group suggest that this method is better at aligning with real-world healthcare needs and improving patient outcomes. Traditional clinical teaching, on the other hand, shows more mixed feedback and less overall satisfaction in terms of patient care and satisfaction.

The data indicate that students in the active participatory teaching group generally have higher satisfaction levels compared to those in the traditional clinical teaching group. The absence of strongly dissatisfied responses and the higher numbers of satisfied and strongly satisfied students in the active participatory group suggest that this method is more effective in improving overall student satisfaction with clinical education. Traditional clinical teaching shows more mixed feedback and less overall satisfaction (Fig. 2).

DISCUSSION

Teachers and students must engage actively to transfer knowledge [7]. Clinical rounds in the final year of MBBS emphasize real-world application to modern healthcare. These rounds require medical expertise, clinical skills, communication, and teamwork. Medical students learn in traditional attachment and collaborative settings. To provide a complete education, lecturers, tutorials, and clinical attachments must be tailored to specific learning needs [8]. This project discussed the findings and debate from an extensive study on final-year MBBS students' views on traditional clinical teaching and active participation in clinical rounds [9].

The investigation contrasted both strategies to determine students' preferences, satisfaction, and efficacy in both situations. Active

Table 1: Better understanding of complex aspects of medicine

Teaching method	Strongly dissatisfied	Dissatisfied	Neutral	Satisfied	Strongly satisfied
Traditional clinical teaching	13	20	15	19	5
Active participatory teaching	0	20	0	32	20

Table 2: Improvement in communication skills with healthcare professionals and patients

Teaching method	Strongly dissatisfied	Dissatisfied	Neutral	Satisfied	Strongly satisfied
Traditional clinical teaching	6	29	20	15	2
Active participatory teaching	0	29	0	21	22

Table 3: Engagement and activeness in the learning process and improvement in relationship with teachers and ease of communication

Engagement and activeness in the learning process					
Teaching method	Strongly dissatisfied	Dissatisfied	Neutral	Satisfied	Strongly satisfied
Traditional clinical teaching	4	21	28	18	1
Active participatory teaching	0	23	0	23	26
Improvement in relationship with teachers and ease of communication					
Traditional clinical teaching	6	19	22	19	6
Active participatory teaching	0	22	0	26	24

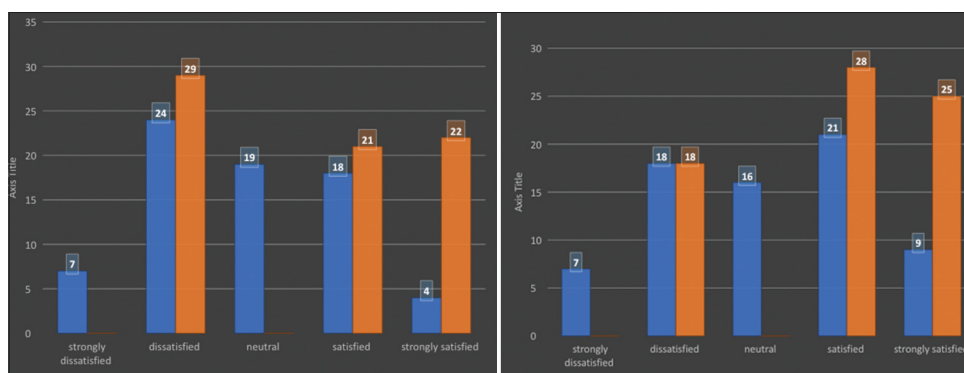


Fig. 1: Connection between theory and practical situations and impact on retention of learned content and valuable

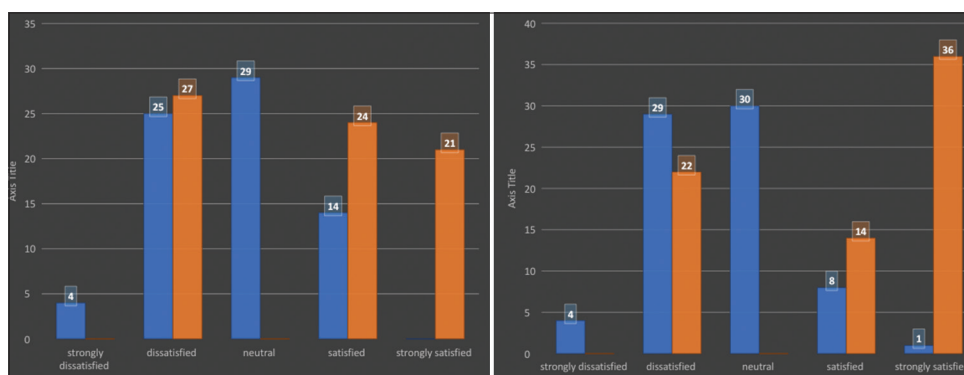


Fig. 2: Observations on improvement in patient care and satisfaction and overall experience and satisfaction in clinical teaching methods

participation in clinical rounds enhances students’ understanding of complex medical concepts by integrating theoretical knowledge with practical application [10]. Key components include interactive aspects, diverse learning styles, and practical experiences [11]. Active participation in clinical rounds is the most effective method for connecting theory and practice in the medical curriculum. This observation is supported by several factors. Students get a better grasp of the subject and its practical application through clinical rounds, which allow them to apply what they have studied in a classroom setting. The dynamic and interactive nature of active participation makes learning more engaging [12]. Traditional methods, however, struggle with limited engagement opportunities, lack of autonomy in decision-making, limited diverse case exposure, inadequate resources, time constraints, and lack of diverse learning styles [13].

Active participatory teaching promotes independent study, with a higher satisfaction rate and a lack of impartial responses, demonstrating its effectiveness in fostering self-directed learning. Traditional clinical training hinders students’ ability to recognize public health concerns due to imbalances between public health, community and preventive medicine, time, interdisciplinary collaboration, and individual patient treatment. Due to these obstacles, students are unable to develop the engaged mentality and solid knowledge of public health concepts, socioeconomic determinants, and population health that are necessary

to address health issues in their full context students learned to recognize and handle public health issues through clinical rounds, case studies, and practical experience [14].

By fostering active participation in clinical rounds, regular feedback mechanisms, and different and multiple case exposure in a day enhances interests and interactive teaching methodologies, the clinical rounds that are more focused on the needs of the students and encourage their active participation, clinical educators can enhance the educational experience and increase engagement levels [15]. This approach promotes active participation, ethical standards, patient prioritization, observing role models, fostering teamwork, collaboration, accountability, professional communication, standard protocols, flexibility, and lifelong learning, compared to traditional clinical teaching [10].

The study found that students generally have a positive impression of active participation in clinical teaching methodologies, with a low number of negative evaluations compared to traditional teaching methods [7]. Active participatory clinical rounds meet students’ demands and prepare them for practical applications. Traditional teaching has flaws, such as a lack of healthcare system exposure, prioritizing group work over individual cases, and inadequate communication skills. As compared to traditional clinical teaching,

