



Perception of Faculty toward Challenges in Teaching and the Role of Medical Education Workshops in Addressing Them: A Mixed-Methods Study

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Avicenna J Med 2022;12:21–30.

Abstract

Background A medical teacher has a very complex job profile, wherein they are expected to train a cohort of newly joined medical aspirants to competent health care professionals. The current study was conducted to identify the challenges faced by the faculty members in medical teaching and to assess the perception of teachers on the role of medical education workshops in addressing these challenges.

Methods It was a Mixed Methods study conducted over a period of 9 months from January to September 2021 in a tertiary teaching medical college and hospital of Chengalpet District of Tamil Nadu amongst the faculty members of the teaching medical college and hospital. In the first phase, universal sampling method was employed, wherein all faculty members were asked to fill the online semi-structured questionnaire. In the second phase, purposive sampling was employed, wherein all teachers who have a minimum teaching experience of 3 years and have attended any medical education workshop were included and interviewed using a focus group discussion guide. The quantitative data was analyzed using descriptive statistics, while the qualitative data was analyzed using manual content analysis.

Results In the quantitative phase, 149 faculty members filled the online questionnaire, of which majority were females (52.3%) and were from the clinical departments (63.1%). The manual thematic content analysis of the FGD resulted in the identification of two themes (challenges and utility of workshops). The challenges theme consisted

Keywords

- ▶ faculty
- ▶ medical students
- ▶ medical education

DOI <https://doi.org/10.1055/s-0042-1744434>.
ISSN 2231-0770.

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of three categories of Faculty, Students, and Administration, while Utility of workshops theme included two categories of refinement of skills, and suggestions for future

Conclusion In conclusion, lack of teamwork in the department, multiple responsibilities assigned to a single person, and shortage of clinical material during COVID-19 were identified as the main challenges in teaching–learning. The medical education workshops play a significant role in improving the knowledge of various domains of teaching and assessment, introduction of innovations, and ensure better performance of the faculty members.

Introduction

A medical teacher has a very complex job profile, wherein they are expected to train a cohort of newly joined medical aspirants to competent health care professionals.¹ The teacher has to not only train the medical students about the basic concepts in medicine, but even make them aware about the recent developments and the needs of the society.^{1,2} In addition, the teacher has to also take the responsibility of training students about clinical reasoning skills, critical thinking skills, problem-solving skills, decision-making, etc., which are all complex attributes.^{3,4}

Before we move forward, we must acknowledge that the ultimate goal of medical education is to improve the health standards of the general population.⁵ Thus, it is quite essential that medical teachers should always incorporate the needs of the community or the local population in mind.⁶ Moreover, we cannot ignore the very fact that a medical teacher is not expected to do teaching alone, but they have to simultaneously discharge the role of being a clinician, a researcher, and an administrator.⁷ However, considering that teaching is one of the primary roles of a faculty member, it is of paramount importance that a teacher should prepare themselves to the existing challenges and the needs of the society.⁵⁻⁷

The guidelines released by the World Health Organization has called for strengthening of the faculty development-related activities to eventually produce competent and motivated doctors.⁸ The Medical Council of India advocates that faculty development programs (FDPs) plays a crucial role in improving the quality of medical education by exposing the teachers to novel concepts in teaching–learning and assessment.⁹ Further, these FDPs also empower the medical teachers with the desired knowledge and skills required by them to discharge their roles effectively, including the roles of being an administrator, a mentor, and a researcher.^{8,9}

The art of ensuring effective teaching and training of medical students is a big challenge for the medical teachers. In this regard, the role of FDPs in the making of a competent medical teacher is very much acknowledged and established.^{2,4,10} However, the potential challenges encountered by faculty during the implementation of Competency Based Medical Education (CBME) amid the ongoing COVID-19 pandemic, remain yet to be explored.

Thus, the current mixed-methods study has been planned to identify the challenges faced by the faculty members in medical teaching and to assess the perception of teachers on the role of medical education workshops in addressing these challenges.

Materials and Methods

It was a Mixed Methods study conducted over a period of 9 months from January to September 2021 in a tertiary teaching medical college and hospital of Chengalpet District of Tamil Nadu.

Study Population and Study Sample

The study population comprises of the faculty members of the teaching medical college and hospital of the rank of Assistant Professor, Associate Professor, and Professor. In the first phase of data collection (Quantitative), online questionnaire was sent to 161 faculty members, while in the second phase (Qualitative), 45 faculty members were eligible to be part of the study.

Sampling Procedure

- **Phase 1 (Quantitative):** Universal Sampling Method.
- **Phase 2 (Qualitative):** Purposive Sampling, wherein all teachers who have a minimum teaching experience of 3 years and have attended one or more of the medical education workshops, as mentioned in inclusion criteria.

Study Tool: Validated Semi-structured questionnaire and FGD guide.

Inclusion Criteria

In the first phase (Quantitative), all the Assistant Professors, Associate Professors, and Professors were included in the study regardless of their teaching experience.

In the second phase (Qualitative), all teachers who have a minimum teaching experience of 3 years and have attended one or more of the following medical education workshops, namely Revised Basic Course Workshop, Advance Course in Medical Education, Curriculum Implementation Support Program, and Fellowship for

Advancement of International Medical Education & Research were included.

Exclusion criteria: The senior residents and tutors were excluded from the study. Also, the faculty members who were unwilling to be a part of the study or did not give consent to be a part of focus group discussion were excluded from the study.

Study variables: The study variables include socio-demographic attributes, specialty, teaching experience (in years), status of attending Revised Basic Course Medical Education Workshop or any medical education course, challenges experienced in teaching, any administrative responsibility, etc.

Data collection: It was performed in two phases, namely.

■ **Phase 1 (Quantitative):** The designed semi-structured questionnaire was sent to all the faculty members ($n=161$) in the institution through a Google Form and the responses were obtained.

■ **Phase 2 (Qualitative):** In this phase, Focus Group Discussion was conducted using the FGD guide, wherein 8 to 12 faculty members participated. During the FGD, opinion of the participants was obtained with regard to identification of the challenges faced by the faculty members in medical teaching and to explore the role of medical education workshops in addressing the gaps.

Ethical considerations: Approval from the Institutional Ethics Committee (IEC No.: 2020/627 dated October 16, 2020) was obtained prior to the start of the study. In the first phase, the consent from the faculty members was obtained using the Google Form after introducing them about the objectives of the research project. The faculty members were ensured that their responses will be kept confidential. In the second phase (qualitative) of data collection, written informed consent from the faculty members was obtained prior to the conduction of the focus group discussion and for the audio recording of the conversation.

Data analysis: It was performed in two phases:

■ **Quantitative:** Data entry was done in Microsoft Excel and data analysis was done using descriptive statistics (frequency and percentages).

■ **Qualitative:** After obtaining the informed consent from all the participants who gathered for the FGD, the entire discussion was recorded in a mobile phone recorder and subsequently typed on a paper word-by-word (verbatim) by the author. Special attention was given toward the transcripts, as they were reviewed multiple number of times to gain an overall understanding. In-fact, no attempts were taken to paraphrase the recorded statements and special impetus was given toward non-verbal communication. This was followed by the act of coding (marking the segments of data with symbols or different colors) of relevant text and then these codes were grouped into categories. In the next step, categories were merged to form themes, and the conclusions are drawn and

reporting done. The process of content analysis was performed by two researchers to augment the trustworthiness of the results, while any kind of disagreement was decided by means of shared dialogue. The sentences written in *Italic font* in the results section refer to the direct quotation from the study participants.

Results

► **Table 1** depicts the distribution of faculty members based on their sociodemographic attributes. It was reported that more than one-third of the study participants in the quantitative phase were from 40 to 50 year age group. ► **Table 2** represents the distribution of faculty members according to their specialty and their professional grade. Overall, a total of 149 faculty members responded to the questionnaire (out of 161 faculty), and considering the greater number of departments in the clinical departments, the representation in all the three cadres was more amongst clinical departments. ► **Table 3** explains about the distribution of faculty members according to the number of years of teaching experience. Maximum respondents, 65 (43.6%) were having an experience of 3 to 10 years, followed by 45 (30.2%) faculty members with an experience of less than 3 years. It was found that a total of 86 (57.7%) faculty

Table 1 Socio-demographic pattern-wise distribution of faculty members

Socio-demographic attributes		Total (%)
Age	Below 30 y	11 (7.4%)
	30–40 y	45 (30.2%)
	40–50 y	54 (36.2%)
	50–60 y	23 (15.4%)
	60–70 y	16 (10.7%)
Sex	Female	78 (52.3%)
	Male	71 (49.7%)

Table 2 Specialty and Cadre-wise distribution of faculty members

Specialty and Cadre		Total (%)
Preclinical	Professors	7 (30.5%)
	Associate Professors	5 (21.7%)
	Assistant Professors	11 (47.8%)
Paraclinical	Professors	12 (37.5%)
	Associate Professors	9 (28.1%)
	Assistant Professors	11 (34.4%)
Clinical	Professors	28 (29.8%)
	Associate Professors	29 (30.9%)
	Assistant Professors	37 (39.4%)

Table 3 Teaching experience-wise distribution of faculty members

Teaching experience (years)	Total (%)
<3	45 (30.2%)
3–10	65 (43.6%)
10–20	19 (12.8%)
20–30	11 (7.4%)
30–40	9 (6%)
Total	149 (100%)

members responded that they have been trained in medical education workshops. These workshops included Basic Course Workshop, Revised Basic Course Workshop (66 faculty), Curriculum Implementation Support Program—Phase I (22 faculty), Curriculum Implementation Support Program—Phase II (24 faculty), Advance Course in Medical Education (7 faculty), Foundation for Advancement of International Medical Education and Research (1 faculty), and Essential Course in Medical Education (2 faculty).

► **Table 4** highlights the various challenges represented by the faculty members in the process of teaching and assessment. The commonest challenge reported was lack of teamwork in the department while planning the schedule and organizing a teaching–learning session, as it was reported by 103 (69.1%) of the faculty members.

Qualitative Analysis

Based on the eligibility criteria, 45 faculty members were found to be eligible for the second phase (Qualitative phase). A total of two focus group discussions (► **Fig. 1**) were conducted, in which 8 to 12 faculty members participated and corresponding sociogram were drawn to reflect the discussion (► **Fig. 2**). The data analysis led into two themes and five categories. The themes include challenges and utility of medical education workshops. The challenges theme consisted of three categories of faculty, students, and administration; while utility of medical education workshops theme included two categories of refinement of skills, and suggestions for future as depicted in ► **Table 5**.

Theme 1: Challenges

Category 1: Faculty

• Innovations

In this study, it was found that innovations in the field of medical education, both in teaching–learning and in assessment, are really difficult to implement. Participants stated that we essentially require support from the department colleagues to make it successful and meaningful.

I feel it is very difficult if I have some innovations to implement because there is always opposition from se-

Table 4 Challenges encountered in teaching

Challenges encountered in teaching	Total ^a (%)
Lack of teamwork in the department	103 (69.1%)
Multiple responsibilities assigned to a single person	77 (51.7%)
Shortage of time to adequately prepare for class	43 (28.9%)
Not able to meet the needs of different learners	26 (17.4%)
Inability to actively engage all students	30 (20.1%)
Not able to motivate students to learn better	41 (27.5%)
Issues with giving constructive feedback	17 (11.4%)
Inability to organize the content within the given timeframe	9 (6%)
Too vast syllabus	23 (15.4%)
Repetition of same topics in theory and practical sessions	39 (26.2%)
Shortage of clinical material during COVID-19	83 (55.7%)
Limitations to use different tools to facilitate online learning	69 (46.3%)
Lack of information technology support	38 (26%)
Administrative concerns (viz. attendance)	51 (34.2%)
Lack of interest among students to learn	48 (32.2%)
High expectations from the administration	34 (22.8%)

^aResponses are not mutually exclusive.

nior faculty and colleagues who are not ready to take up the innovation, whether it is in the field of teaching–learning or in assessment in my department.

• Technology

In our study, concerns were raised about the competence levels of the faculty members and their readiness to be up for the task of successful introduction of technology.

If you want to use technology, say for example, application of technology (like e-learning), there will be some kind of hindrance... In the sense, whether the senior faculty will be able to cope and go through with the implementation of competency-based medical education.

• Clinical Teaching

In the current study, it was highlighted that in comparison to the pre and para-clinical departments, the clinical departments are not coming forward to adopt different methods of clinical teaching (viz. One Minute Preceptor Model, near peer learning, problem-solving, etc.) or online teaching, and e-learning.



Fig. 1 Focus group discussion.

Date = 27th August 2021

Facilitator = Dr. Saurabh Shrivastava

Participants = 08

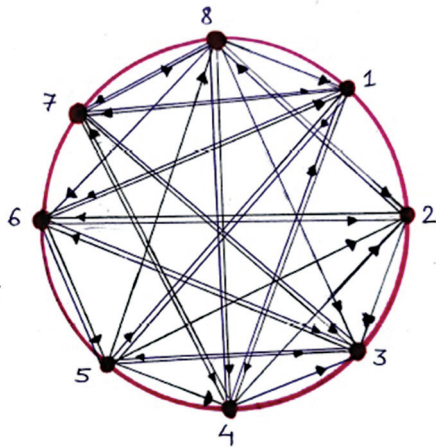


Fig. 2 Sociogram.

Table 5 Coding process

Themes	Categories	Codes
Challenges	Faculty	Innovations
		Technology
		Clinical teaching
		Readiness of faculty
	Students	Motivation
		Students' engagement
	Administrative	Teacher student ratio
		Time shortage
		Lack of clarity
Assessments		
Utility of workshops	Refinement of skills	Improving knowledge
		Introduction of innovations
		Better performance
	Suggestions for future	Reinforcements
		Evaluation of workshops
		Needs assessment
		Following the correct practice
		Targeting students

Normally, pre and para-clinical faculty members have more exposure to medical education, while clinical teachers have more preference to clinical work and less exposure to medical teaching, especially in case of senior teachers. The senior clinical teachers generally adopt the same kind of bedside teaching what they have been doing since the start of their career. They are finding it difficult to adopt new methods in both clinical and classroom teaching.

• Readiness of Faculty

In the present study, the participants reported that irrespective of the administrative support and student participation, a lot will depend upon the readiness of the faculty to be someone who is willing to support the entire process of curriculum planning and delivery willingly.

Are we ready to implement competency based education in our settings?? As we talk about small group discussions, skill-based teaching, electives, etc... I feel 90% of the faculty members are still not aware about what will be their role or what is expected of them. Only 10% of faculty members are aware about what is happening and how it has to move further, but we will need teamwork and support from everyone to succeed.

Category 2: Students

• Motivation

In our study, we realized that the extent of student motivation has been found to be lacking in different sessions and their behavior has been quite negative. There are many students who gradually lose their interest and motivation to read medicine or right from the start never wanted to do medicine, but were compelled to join the course by the parents. This becomes a tricky scenario for all the involved stakeholders (viz. student, parents, and teachers), and there is a need to take adequate steps to prevent the occurrence of such incidents in the future.

There are so many students with poor motivation also... Actually, speaking with reference to my personal experience, students are not taking interest in class and even misbehaving while a teacher is taking session. They feel like their parents have paid money and now it is the responsibility of the college to make them pass and help them to complete the course.

• Students Engagement

Regardless of the stream, the student has to be actively engaged in the learning process to enable deep learning, augment retention of knowledge, and enhance practical application of the same. Both teachers and students can be held accountable for limited engagement of the students in the learning process.

We are finding it very difficult to actively engage student, especially the 2 hour sessions that have been assigned to our

department for the entire duration and in the online sessions, which every faculty member has faced or will face.

The sessions have to be planned in such a way that the students can continue to concentrate in the entire session, and this will necessarily depend upon the changes in the stimuli and effective incorporation of interactive strategies for teaching.

Category 3: Administrative

• Faculty Student Ratio

In this study, the importance of maintaining proper faculty-student ratio was envisaged. It was reported that adequate number of faculty have to be there in department, so as to ensure that the recommended numbers of teaching hours allocated to small group discussion can be maintained.

If we want some small group teachings to happen, we don't have adequate number of faculty to divide the entire batch of students in small groups and teach them. In fact, the ratio that has been recommended by the regulatory body is less, in my opinion than it should be.

• Time Shortage

The successful implementation of competency-based medical education will essentially require dedicated time and efforts from the teachers, especially in the initial stages, till everything is implemented for some years and we overcome the initial hurdles. In our study, the participants revealed that the clinical faculty often state that they are very much busy in the clinical work and do not have adequate time to invest in teaching.

Everybody is engaged in some or the other work, and they have to put in their time and mind towards the successful delivery of the curriculum. A teacher has to allocate a specific amount of time to prepare for the assigned theory or clinical or practical session, so that they can deliver the content based on the pre-defined specific learning objectives.

• Lack of Clarity

In our study, the participants responded that the process of transition to CBME has not been smooth and we lagged on multiple fronts, especially in the initial years. This has to be because of various administrative reasons and we have to rectify the overall process before it becomes a long-term alteration.

The decision to move from conventional to competency-based curriculum was a historical one, but due to the confusion about the scheduling, shortage of teachers, lack of available facilities and reluctance/unprepared nature of the faculty members, we have failed to make the right move

- **Assessments**

Assessment is the heart of the competency-based curriculum and we have to strengthen the same. Formative assessments and informal assessments have been given priority, so that the students no longer have the fear of university exams and at the same time can become better based on the received feedback from the teachers.

The regulatory body has clearly defined every subject-specific competency and the way in which it can be assessed by the use of different assessment methods. However, we are really not sure whether the proposed assessments are being strictly adhered. Many departments continue to assess the students, the way in which they were doing it earlier due to the lack of familiarity with the recently proposed assessment methods.

Theme 2: Utility of Medical Education Workshops

The respondents from both the FGDs unanimously mentioned that they are of the strong opinion that the medical education workshops play an important role in improving the competence level of teachers in effectively discharging their roles in teaching-learning and in assessment.

Category 1: Refinement of Skills

- **Improving Knowledge**

The workshops organized by the Medical Education Unit (MEU) play an instrumental role in improving the knowledge level of teachers about the basic and common terminologies used in medical teaching. In fact, these workshops become quite meaningful for the faculty members who are beginning their professional careers.

I was really lucky to get trained in my first year of service in the Revised Basic Course Workshop. I came to know about the place where I am doing things incorrectly and how best I can rectify myself to not only improve my skills, but even be of help to the students.

- **Introduction of Innovations**

In our study, we came to know that the MEU workshops are being immensely acknowledged by the faculty members. This is not only because the participants learn about the way to carry out things in the correct manner, but mainly because we are trained to improve ourselves to become better, by enhancing our skills and incorporating innovations both while teaching and while assessing.

MEU workshops turned out to be extremely useful for me, as I learnt about the various ways in which a large group session can be made interactive through introduction of simple strategies.

- **Better Performance**

In this study, the participants informed that the workshops targeting different domains in medical education make us

aware about our responsibilities in teaching and assessment. The workshops even highlight the need to target different types of learners and thereby ensure that all students are benefited.

These workshops made me understand what the students really need and how we can make small adjustments in our behaviors in the class, well supported with prior preparation, to help the students.

Category 2: Suggestions for Future

- **Reinforcements**

In the present study, all members were convinced that after attending the workshops, the passion for adopting the learned things stayed with them, but gradually it started to reduce. This calls for the need to periodically organize small sessions (half-day or one-day) to reinforce the learned topics.

When I participated in the Revised Basic Course Workshop, I learnt about the criteria that should be met while framing the Specific Learning Objectives... I meant the objectives should follow ABCD pattern and should be SMART in nature.... But, in the due course, say after 2 years, since I attended the Workshop, I think I am not paying the due interest while framing the SLOs. This can be reinforced, if the MEU can organize periodic sessions.

- **Evaluation of Workshops**

Evaluation is a key component in any initiative, and the same thing stands true, even for the medical education workshops. We should aim to evaluate the workshop using Kirkpatrick 4 level model of evaluation, wherein level 3 and 4 have to be given due attention, and just not stop with the initial 2 levels.

Being one of the organizers of the MEU workshops, I realized that we are ending our workshops with just Kirkpatrick level 1 evaluation (in terms of the immediate feedback of participants) and level 2 evaluation (in terms of pre and post-test), but what about level 3 and level 4. We have to look for the change in behavior and the impact of the acquired knowledge & skills in the due course. We are lagging big time in that aspect..

- **Needs Assessment**

In general, need assessment is the first step for any initiative that has been planned at any level. The same thing is applicable even in medical education and it is always good to organize those FDPs which are needed by the target audience.

I must congratulate our MEU which has been really proactive to organize different activities for the benefit of faculty. Having said that, I feel instead of conducting these programs, we should adopt a bottoms-up approach, wherein we carry out needs assessment and based on the felt needs of the faculty members, specific programs are organized, so that they feel happy to be a part of the training process.

• Following the Correct Practice

All the MEU workshops target one or more aspects of teaching–learning and assessment, but there is no point in just teaching, unless it is brought into regular practice. Many times, there is a lot of difference between what is taught in these workshops and what is actually practiced in departments and this gap has to be minimized at the earliest.

I strongly feel that though we talk so much about how to frame question papers and all, but when we actually see the University Question Papers, I am very sorry to note that the taught practices are not followed by the paper setters. This has to stop as it is quite demotivating for the teacher who has attended such workshops and wants to make some difference

• Targeting Students

MEU workshops should also be planned for students making them aware about the entire process and the expectations from them, so that we all work together as a team

I personally feel all efforts at present are directed toward teachers, but we are missing an important stakeholder and that is a student. All changes are happening at the teacher level, while students are not at all aware about the developments. Students should also know what is competence, why they have to be competent? Why they have to learn a specific topic? How it will help them to become a better health care professional, etc.

Discussion

The present mixed-methods study was performed among the faculty members of a medical college to identify the challenges encountered by them in teaching and the role of medical education workshops in bridging these identified challenges. In our study a total of 149 faculty members responded, of which 54 (36.2%) were from the 40 to 50 years age group, while 78 (52.3%) were female. In a qualitative study done to identify the challenges involved in virtual education in a Medical University in Iran, 18 (64.3%) of the faculty members were females.¹¹

In our study, 47 (31.5%), 43 (28.9%), and 59 (39.6%) faculty members were of the rank of Professor, Associate Professor, and Assistant Professor, respectively. On the other hand, in a study done in Iran, 21.4% (six) of the participants were Associate Professors, while the remaining 22 (78.6%) were of the Assistant Professor cadre.¹¹ This reported difference in the cadre could be due to the fact that we enrolled all the faculty members in the quantitative phase of the study, while the study done in Iran, targeted selective faculty members who had exposure to virtual education.

In our study, a total of 86 (57.7%) faculty members were trained in one or other kinds of medical education workshops. In another study done in the King Fahd Hospital of the University, Saudi Arabia, to assess the reforms in the assessments practices, subsequent to the conduction of a series of

workshops, a significant proportion of the faculty members and 34 pre-clinical and clinical course coordinators were trained.¹² All the faculty members trained in our institution underwent the training as a part of the mandatory workshops recommended by the regulatory body, wherein adequate exposure is being given toward teaching–learning, assessment, and framing of proper questions. On the contrary, the trained faculty members in the medical institution in Saudi Arabia were exposed to workshops on assessment, multiple-choice questions, and item analysis.¹²

In our study, the most common challenge reported by 103 (69.1%) faculty member was the lack of teamwork in the department. The Medical Council of India recognized the need of collaborative efforts and thereby has strongly advocated for the involvement of every faculty member, including the postgraduate residents in the process of teaching and assessment of the undergraduate students.^{13,14} Realizing the fact that we have transitioned from the conventional curriculum to the competency-based curriculum in Indian settings, it is an historical step and the success of the decision will depend upon the planning and the way it will be implemented in each and every medical institution.

In the current study, 77 (51.7%) faculty members reported that multiple responsibilities are being assigned to a single person and that makes the task of teaching challenging. We cannot ignore the fact that one of the main factors responsible for this is shortage of faculty staff. The findings of a study done in New Zealand revealed the success of the initiative, wherein residents were trained and used as teacher in the complete institution.¹⁴ This is one of the key strategies to bridge the faculty shortage and at the same time strengthen the process of teaching–learning and assessment by carrying out more number of small group teaching sessions (and reducing the percentage of didactic lectures).¹⁴ Furthermore, there is an immense need to formulate strategies to promote faculty recruitment, training, and their subsequent retention within the institution by providing a better workplace environment, welfare measures, and opportunities for professional and personal growth.¹⁵

In our study, we found that 11.4% (seven) of the faculty members responded that their main challenge in terms of teaching was their inability to provide feedback to the students. In a qualitative study done amongst the faculty members in the Department of Medicine, Aga Khan University Hospital, Pakistan, feedbacks such as increasing work load on the faculty, a sense of reluctance fearing their evaluation by the students, and the rising expectations from administration with regard to the patient care were reported.¹⁶ In another study, performed in the Department of Psychiatry in the United States of America, giving feedback to the students during workplace-based assessments was identified as one of the key challenges.¹⁷

The origin for the challenge of inability to provide feedback can be traced to the very fact that we as teachers hardly received any significant feedback from our teachers, and that we were never exposed to the art of giving feedback.^{16,17} This challenge needs to be seriously looked upon and specific medical education workshops or sessions should be

organized to help the faculty members build their skills in providing constructive and timely feedback, the various ways in which feedback can be given, and the do's and the don'ts while administering feedback.¹⁶⁻¹⁸

The COVID-19 pandemic emerged as one of the major challenges in the process of delivery of medical education. In our study, 55.7% (83) of the participants reported the shortage of clinical material during COVID-19, while 69 (46.3%) faculty members expressed their inability to use online tools. The findings of a study done in Iran reported that the process of virtual education is significantly impacted by defective culture in the institution, and infrastructure constraints.¹¹ Even though, it is a challenging task to implement online learning, it can be done, by proper planning, conduction of faculty development workshops, and through technology support.^{11,19}

In our study, we found that most of the faculty members were not aware about their individual responsibilities in the process of implementation of CBME. Similar sort of challenges was identified in a qualitative study done in South India, wherein it was recommended that the first step for the successful implementation of any initiative has to be faculty development.²⁰ All these challenges can be tackled by proper capacity building and this will require a need-driven conduct of faculty development workshops to prepare the teachers for their roles.²⁰

The findings of a study done in Florida revealed that the workshops that were organized in the institution were not need driven.²¹ The same suggestion we also found in our study and it clearly indicates that all the workshops should precede with needs assessment to enhance better acceptance and active engagement of the faculty members. The results of a study done in the United States of America revealed that the workshop on simulation was quite effective and helped them to refine their skills in delivering education.²² On a similar note, even our study participants opined that the participation in medical education workshops played an instrumental role in assisting them to plan for their teaching sessions, execution during class, carrying out assessments, and provision of appropriate and constructive feedback.

One of the suggestions that came out of analysis of our FGD revealed that to be effective on a sustainable basis, we have to expose the faculty members to a series of workshops, and that a single workshop loses its effectiveness with the passage of time. Similar sort of findings was reported in a qualitative study done subsequent to a training workshop to Gynecologist faculty members with an intention to train them for a core procedural skill in the Massachusetts General Hospital.²³ This can be explained by the fact that immediately after the training session, everyone will be charged-up to make some difference and implement the learnt practices. However, there will be a gradual loss in interest of the faculty members and soon the extent of adherence to the good practices starts waning. There arises the need to conduct similar type of sessions periodically as a reinforcement, so that the faculty members continue to follow the acquired knowledge and skills.

The limitation of the study was that it was conducted in a single medical institution and we adopted only one qualita-

tive research method (viz. FGD) in our study, the findings of the study lack credibility. However, we corroborated the challenges identified in the quantitative phase with the challenges identified during the FGD (viz. multiple responsibilities assigned to single person, active engagement of students, lack of support from the information technology department, and lack of interest among students to learn).

Potential Recommendations

- **Faculty members:** To ensure effective teaching and benefit of the students, the first and foremost thing is to have better teamwork and cooperation within the department. The department colleagues should sit together and realize the significance of preparing specific learning objectives for each session, and the appropriate teaching-learning strategies to make the sessions interactive. Further, the senior faculty members who are reluctant to adopt innovations or recent technologies can be addressed separately by another senior faculty from some department who is motivated enough. The idea behind this interaction is to make them understand that if one amongst them can do it, even others can adopt. Moreover, they should be made accountable and sensitized in such a way that they start owning the process.
- **Workshop organizer:** The MEU should strategically plan their sessions in such a way that all the workshops are periodically organized once again. This will reinforce good practices among faculty members and motivate them to continue to adopt them for better learning outcomes amongst students. Further, the MEU should not stop with Kirkpatrick level 1 (reaction) and Kirkpatrick level 2 (learning) evaluation of the training programs they organize, rather look for change in behavior and institutionalization of the better practices, as a follow-up initiative. This follow-up initiative will actually ascertain the effectiveness of the workshops. In addition, the training programs organized by MEU should not be done just because they intend to do it, as in that case, acceptance from the attending participants would not be high. The ideal approach will be to ascertain their needs assessment and identify on what all domains the faculty members wants to get trained for improving themselves. Based on the obtained responses, the MEU can make a calendar of events and implement the same for better acceptance and enthusiastic participation of the faculty members.
- **Administrators:** The administrators have to play a crucial role in bridging these identified gaps. It has to start with creating a culture within the institution, wherein the workshops organized by MEU should be given topmost priority and supported by all means. In addition, the teacher-student ratio has to be improved, so that all the teaching or assessment innovations can be implemented by the individual departments. Furthermore, the annual academic

calendar has to be shared with all the departments and students well in advance and it should be strictly adhered. This will eliminate all kinds of confusion amongst students and faculty members and there will be a sense of clarity among all stakeholders.

Conclusion

In conclusion, lack of teamwork in the department, multiple responsibilities assigned to a single person, and shortage of clinical material during COVID-19 were identified as the main challenges in teaching–learning. The medical education workshops play a significant role in improving the knowledge in various domains of teaching and assessment, introduction of innovations, and ensure better performance of the faculty members.

Note

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Funding

None.

Conflict of Interest

None declared.

Acknowledgment

The author wishes to acknowledge the continuous guidance and support extended by Dr. Nilakanthan Ananthakrishnan, Dean of Faculty, Sri Balaji Vidyapeeth, and Dr. Balachandra V. Adkoli, Director, Centre for Health Professions Education, Sri Balaji Vidyapeeth.

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