

Research Article

Simulation-Based Teaching Using Standardized Patients for Advanced Communication Skills Among Medical Undergraduates

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A B S T R A C T

Introduction: Good communication skill is the foundation for the doctor-patient relationship. This is even more important when we encounter medical challenges. We conducted a study on undergraduate students and facilitators to record their perceptions regarding simulation-based teaching in complex communication.

Method: A mixed method study was conducted among the 1st batch of CBME MBBS students presently in Phase III part I, in a Medical College located in coastal Andhra Pradesh. It was conducted during the AETCOM classes in the Department of Community Medicine, among a convenient sample of 119 students. A module was created to develop medical trainees' competencies in advanced communication skills by SBT using standardized patients. Feedback was gathered from the students.

Result: The majority (95.8%) of respondents were comfortable with this TL method. The suitability and appropriateness of the case scenarios were agreed upon by 95% of the participants. Sufficiency of allocated time for learning through role plays was agreed upon by 84.88% of the participants and achievement of learning objectives was agreed upon by 85.15% of participants. Mock press conferences were found to appeal more (42%) to the participants. There is an increase in the self-rating about knowledge, confidence, communication, team building and empathy demonstration after the training.

Conclusion: The simulation-based structured teaching program on 'advanced communication' using standardized patients is acceptable to the two major stakeholders, students (learners) and faculty (teachers). It is feasible within the given context which is the most commonly prevailing scenario in the teaching medical institutions.

Keywords: Simulated Patients, Standardized Patients, Mixed Method, Advanced Communication, Medical Students, Breaking of Bad News

Introduction

Communication skill is the ability to use language (receptive) and express (expressive) information, and this is an essential component of the medical curriculum. An Indian medical graduate is expected to be a good communicator.¹ In their day-to-day life, the Indian medical graduates are expected to communicate with the patients, their relatives and caregivers, the general public, colleagues, public authorities and the court of law.

Communication involves sharing information from one person to the other person. Effective communication is when the information is conveyed by retaining the same content and context. Effective communication depends on the richness of ideas, as it is an art and a process of creating and sharing ideas.²

Basic communication skills form the foundation for the framework of advanced communication skills. The advanced skills are framed within a general understanding of how the communication process there is an understanding of all the elements of communication among people, the impact will be much greater because their influence doesn't remain on their communication alone but extends to influence the communication of others too. Hence, advanced communication skills are, in essence, leadership skills. They provide people access to ways in which they can guide and direct communication amongst individuals or a group so that they can achieve their goals and outcomes.² Advanced communication skills empower individuals to persuade ideas with clarity, purpose, and efficiency to maximize their impact on their audience.

These skills can be learnt and practiced. It involves learning about the communication process, how it works, how to communicate the exact message to be conveyed, the different modes and the best mode of communication, and factors influencing the ability to convey and receive messages.²

The traditional medical curriculum does not incorporate formal training for students in soft skills, such as ethics, professionalism, or communication.³ The Competency-Based Medical Education (CBME) curriculum has been implemented in India since 2019. The Graduate Medical Education Regulation (GMER) introduced competencies on Attitude Ethics & Communication (AETCOM), where communication skills are being taught systematically and phase-wise to Indian medical graduates.⁴ Patient interaction, small group learning, video recording and review, rehearsal, and other teaching-learning methods (TLM) are used to teach students these competencies.⁵

Simulation-based education is one of the most used and successful methods to facilitate learning and the development of competencies in health professional

education.⁶ Standardized patients (SPs) as a teaching modality is widely practiced in simulation-based teaching worldwide and for various healthcare providers at all levels of learning. Advanced communication skills may not be taught by exposing the undergraduates directly to real patients without prior training because using SPs in teaching communication skills can provide a controlled environment in which it is safe to learn from errors.⁷ This can also greatly enhance fidelity in simulation scenarios.⁸

Therefore, the present study attempted to assess the acceptability and feasibility of the simulation-based structured teaching program on 'advanced communication' by recording student's perceptions and facilitators' opinions.

Materials & Method

This mixed-method study was conducted among the 1st batch of CBME MBBS students in Phase III part I, in a medical college located in coastal Andhra Pradesh. This study was conducted during the AETCOM classes in the Department of Community Medicine among a convenient sample of 119 students, over a period of 5 weeks during Nov–Dec 2022 (5 AETCOM sessions of 2 hours each). Those students who had participated in the training session in basic communication skills conducted one week earlier, attended this session on advanced communication skills, and responded to a feedback questionnaire following this session were included, while those students who were absent during either or both these sessions were excluded from the study. Before the study, the purpose of the study was explained to the participants understandably and informed consent was obtained from them. Ethical clearance was obtained from the Institutional Ethics Committee.

The module for teaching AETCOM competencies was developed and validated by the medical education unit faculty. The module on advanced communication skills consisted of competencies related to empathy, breaking bad news, and handling print and electronic media.

The students were introduced to the competencies by an interactive lecture and cinema education on communication skills. This was followed by teaching in small groups, each of 30 students. Each session was conducted for two hours, during which they were assigned to different computer-based virtual patient cases to complement an interactive course that emphasized skills practice using standardized patients (SP) in a smaller group of six students each. Role plays based on the assigned scenarios were enacted by professional actors trained as standardized patients. The teaching-learning sessions were facilitated by ten trained faculty. Each session was followed by a debriefing session conducted at the end. During this debriefing exercise post-simulation, the students reflected on their roles in the role-play along with that of others and revealed their

perceptions. After the role-play, the facilitator/ supervisor, peers, and the SP provided immediate verbal feedback to the student, acting as the doctor. The duration for each role-play was approximately 15 min, followed by post-simulation debriefing for about 15 min.

Finally, a self-administered feedback questionnaire containing questions based on a Likert scale and open-ended questions was used to collect student feedback. Responses to Likert scale questions were analyzed as proportions and chi-square tests. A Weighted average was taken to compare the feedback about "advanced communication training" before and after the session. The opinions of the facilitators were recorded by conducting a focus group discussion (FGD). The satisfaction index for each item in the Likert scale is calculated using the formula:

$$\frac{[(n1 \times 1) + (n2 \times 2) + (n3 \times 3) + (n4 \times 4) + (n5 \times 5)] \times 20}{(n1 + n2 + n3 + n4 + n5)}$$

A satisfaction index of > 75 was considered acceptable.

Responses to open-ended questions in the feedback questionnaire for the students and the responses of FGD were analyzed by inductive thematic analysis, and themes were generated for the same.

Results

Participants were asked if they were comfortable with this method of teaching and learning in a five-point Likert scale. The majority (95.8%) of the respondents had agreement (27.7% strongly agreed and 68.1% agreed) that they were comfortable with this TL method. Regarding the suitability and appropriateness of the case scenarios used while teaching "advanced communication skills," 95% of the participants agreed (24.4% strongly agreed and 70.6% agreed). Role plays were conducted using standardized patients while teaching the participants about "advanced communication," and the participants' perceptions were recorded to determine the sufficiency of those dedicated time slots for effective teaching. A total of 84.88% of students had an agreement (20.17% strongly agreed and 64.71% agreed) regarding the sufficiency of allocated time for learning through role plays. About 85.15% had an agreement (21.85% strongly agreed and 63.03% agreed) on

the achievement of learning objectives. A majority (97.6%) agreed (31.1% strongly agreed and 66.5% agreed) that this TLM should be used routinely for advanced communication skills (Table 1). The satisfaction index was above 75 for all the items, as shown in Table 1, and this indicates the acceptability of this teaching-learning method for advanced communication skills.

On probing the participants about the most appealing moment ("Aha" moment) during the entire teaching and learning session, it was found that mock press conferences appealed the most (42%), followed by a role play on breaking bad news (35%) (Figure 1).

Self-efficacy scores of students in knowledge, confidence, communication, team building and empathy demonstration showed a significant increase in scores after the training compared to scores before the training (Table 2). Weighted averages before and after were compared and found to be statistically significant (Figure 2).

The themes generated for the open-ended question, mentioning two points that the participants liked most about the sessions, were faculty facilitation, feedback, team interaction, high fidelity, and appropriate learning methods. The themes generated for the open-ended question on mentioning suggestions for improvement of the sessions included giving more time for the session and video recording of the session (Table 3).

Some of the verbatims recorded during the focus group discussion with the facilitators were:

"Amazingly, the quintessence of the learning was well absorbed by the students, and it was a wonderful experience to see them applying it in their communication with standardized patients during the role play."

"The students showed an extraordinary enthusiasm in dealing with advanced communication related to print and electronic media, which was highly appreciable."

"The sessions provided a real experience because we had standardized patients during the role play."

"In the debriefing sessions, students had an opportunity to clarify their doubts and fine-tune their skills."

Table 1. Perception of the Participants towards the Teaching-Learning Method (TLM)

S. No.	Item	1*n (%)	2*n (%)	3*n (%)	4*n (%)	5*n (%)	SI
1	You feel comfortable learning with this method.	0 (0)	1 (0.8)	4 (3.4)	81 (68.1)	33 (27.7)	84.53
2	The case scenarios designed were aptly suited to teach "advanced communication".	0 (0)	1 (0.8)	5 (4.2)	84 (70.6)	29 (24.4)	83.69
3	The time allotted for the role plays was sufficient to depict the scenario effectively.	1 (0.8)	3 (2.5)	14 (11.8)	77 (64.7)	24 (20.2)	80.16

4	The learning objective was achieved.	2 (1.6)	5 (4.2)	11 (9.2)	75 (63.1)	26 (21.9)	79.83
5	This TLM should be used routinely for advanced communication skills.	0 (0)	1 (0.8)	2 (1.6)	79 (66.5)	37 (31.1)	85.54

1*: Strongly disagree, 2*: Disagree, 3*: Neutral, 4*: Agree, 5*: Strongly agree, SI: Satisfaction Index

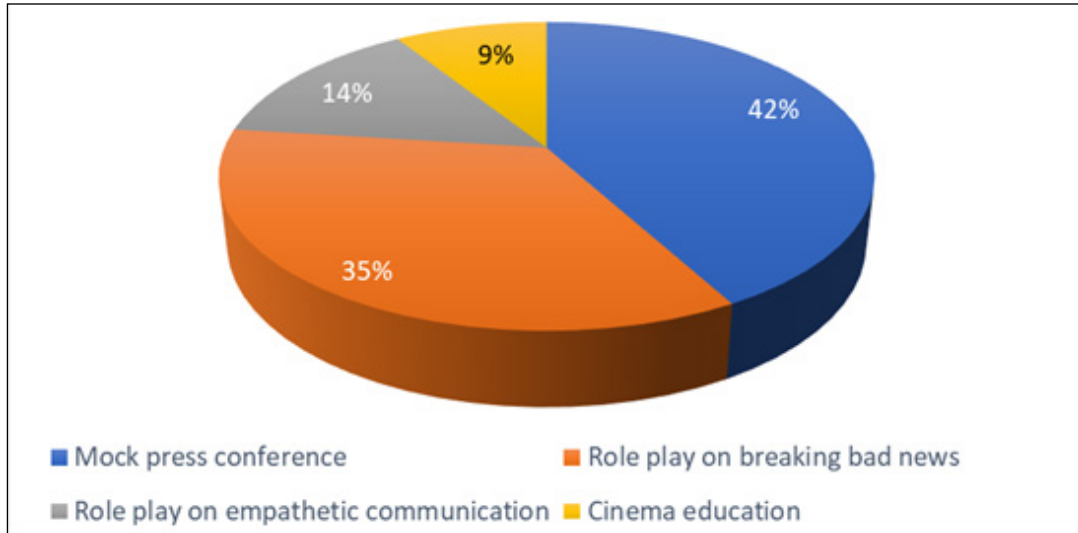


Figure I. What was the "Aha" Moment?

Table 2. Self-Efficacy Scores of Students in "Advanced Communication" Before and After the Session

Attributes	Ratings	Before Training		After Training		p Value
		n	%	n	%	
Knowledge	0	19	16.0	23	19.3	0.0007
	1	52	43.7	46	38.7	
	2	25	21.0	13	10.9	
	3	13	10.9	24	20.2	
	4	5	4.2	13	10.9	
	5	5	4.2	23	19.3	
Confidence	0	31	26.1	2	1.7	0.0003
	1	45	37.8	26	21.8	
	2	20	16.8	43	36.1	
	3	14	11.8	10	8.4	
	4	7	5.9	30	25.2	
	5	2	1.7	8	6.7	
Communication	0	20	16.8	2	1.7	0.0001
	1	47	39.5	22	18.5	
	2	30	25.2	45	37.8	
	3	13	10.9	13	10.9	
	4	7	5.9	28	23.5	
	5	2	1.7	9	7.6	
Team building	0	27	22.7	21	17.6	0.0001
	1	37	31.1	48	40.3	
	2	30	25.2	14	11.8	
	3	14	11.8	21	17.6	
	4	9	7.6	15	12.6	
	5	2	1.7	21	17.6	

Demonstrating empathy	0	16	13.4	24	20.2	0.0004
	1	50	42.0	50	42.0	
	2	29	24.4	7	5.9	
	3	12	10.1	23	19.3	
	4	8	6.7	15	12.6	
	5	4	3.4	24	20.2	

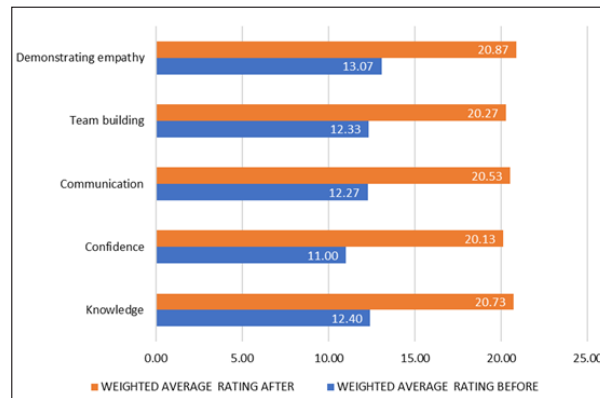


Figure 2. Comparison of Weighted Average Rating Before and After Training

Table 3. Themes Generated from the Analysis of Students' Responses to Open-Ended Questions

Q. No.	Open-Ended Question	Themes Generated	Verbatim
1	Mention any two points that you liked the most about the sessions.	a. Facilitation by faculty	a. Guidance and support by the faculty made the sessions easy and fruitful.
		b. Feedback	b. The feedback given by the facilitators helped us to understand our mistakes and improve ourselves.
		c. Interaction in team	c. Interaction was good with each other.
			d. We got to know each other.
			e. Collaborating with my classmates was truly enjoyable.
			f. The session gave a feeling like we are in real profession of doctors.
		d. High fidelity	g. Situations enacted during role play reflected real-life scenarios.
			h. Standardized patients appeared so real and we couldn't make out until we were told that they were not real patients.
			i. Developed the ability to work in a team.
		e. Appropriate learning method	j. I could learn how to communicate with patients and show empathy towards patients.
k. Could learn how to communicate with the media and about written communication.			
l. I'm more confident in dealing with similar scenarios in real life.			
2	Mention 2 suggestions for improvement of the sessions.	a. Giving more time for the session	a. Allocate more time for the activity
			b. Give some more time for the performance
		b. Video recording	c. Video recording of the role plays may be enabled and shared with the students for self-assessment

Discussion

A similar study conducted by Tanwani et al. on "Perception and attitude of medical students towards communication skills lab and teaching module" showed that 96.43% of students opined that the training had improved their communication with the patients. They also felt that such training should be integrated into the regular teaching curriculum of our country.⁹

In another study on "Perceptual feedback of undergraduate medical students on the effectiveness of AETCOM (Attitude, Ethics, and Communication) session in foundation course" conducted by Sathiyavinotha et al., the feedback of the overall AETCOM session was considered as good by 50%.¹⁰

Modi et al., in their study on "Teaching and assessing communication skills in medical undergraduate training," concluded that good communication skills are essential for an optimal doctor-patient relationship and also contribute to an improved health outcome.¹¹

The majority of the students perceived positively about simulation-based teaching using standardized patients for advanced communication skills in the present study. This is also reported by Isaksson et al., wherein the students stated that the training with SPs enabled them to practice challenging consultations in a safer and more patient-centered way and to manage their feelings when exposed to negative patient reactions, giving them new learning experiences.¹² These reflections correspond well to models of adult learning where the focus should be on creating a safe and active environment and where the transformative learning process should include emotional elements, encourage critical self-examination of the situation causing the discomfort, and develop new ways of thinking about and managing the situation.^{13,14} Corroborating with this, some students mentioned that, as a result of feedback and discussions during the simulation exercise, some of the students implemented the learning immediately within the consultations. At the same time, some described having better conversations and a better ability to develop relationships with patients later after the training.¹²

Simulated patients/ standardized patients have been recommended for training communication skills in case simulations¹⁵ and are now often involved in education at medical schools¹⁶⁻¹⁸. In the recent past, simulation methodologies with SPs have been used extensively in medical education and have been suggested to be a key determinant of a student's success in learning, with safe, active, and collaborative learning environments regarded as crucial.¹³

The findings in the present study were supported by several studies demonstrating that the simulated patients (SPs) based objective structured clinical examination (OSCE)

approach is a feasible, reliable, and valid approach for communication skills training in health science education.¹⁹⁻²¹ SPs are commonly used in OSCE to teach or assess medical students' CSs.²²

The research conducted in high and middle-income countries unswervingly confirms clear links between the communication skills of the physician and the relief of patient symptoms, adherence to medical advice, and overall satisfaction with care.²³⁻²⁵ Thus, this study adds that a module-based structured teaching program on advanced communication among medical students is perceived to improve their knowledge and communication, bring confidence in dealing with communication difficulties, be empathetic, and help in team building. Using standardized patients during the training on "advanced communication" helps bring students a good teaching-learning experience.

Conclusion and Recommendations

The simulation-based structured teaching program on 'advanced communication' is acceptable to the two major stakeholders, students (learners) and faculty (teachers). It is feasible within the given context, the most commonly prevailing scenario in teaching medical institutions in India and other countries. Hence, this training on advanced communication skills can be implemented and practiced in similar medical ecosystems. More such research can be conducted to investigate its applicability in diverse scenarios and other allied health professional disciplines, as communication skills are the heart of the healthcare profession.

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Conflict of Interest: None

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