

Using Nukkad Natak a traditional Indian art form in teaching and engaging students of MBBS Phase-I in AETCOM module 1.1 principles

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Abstract: *Background:* The AETCOM principles are crucial in medical education, aiming to develop compassionate, patient-centered healthcare professionals. Traditional didactic methods often fall short in engaging students and internalizing these competencies, hence we planned integrating Nukkad Natak, to teach AETCOM principles using the Sensitization, Immersion, and Reflection (SIR) format. *Methods:* Following group discussions with faculty members, the integration of Nukkad Natak and video clips were decided. Students participated in role-plays simulating clinical encounters, taking on roles such as clinician, communicator, and lifelong learner. A self-administered pre-test assessed baseline understanding, with retention evaluated through post-tests and summative exams. Feedback was collected using a validated questionnaire with Likert scale and open-ended questions, and qualitative thematic analysis was performed. *Results:* The approach was highly engaging, with 99% of students preferring it over traditional lectures and 71% reporting better internalization of a doctor's societal role. Reflective writing indicated improved understanding and retention of AETCOM concepts. The SIR format proved effective, with over 90% student interest and a significant increase in attendance and participation. *Conclusion:* Integrating Nukkad Natak offers a culturally relevant, engaging, and practical method for teaching AETCOM principles. This approach enhances communication skills, empathy, and ethical decision-making, preparing students for their professional roles.

Keywords- AETCOM, Nukkad Natak, Patient-Centered Healthcare Professionals, SIR format

Introduction

Attitudes, Ethics Communication first made an appearance under, Graduate Medical Education (GME), 1997 in India while in 2015 the MCI vision document introduced training in communication [1-2].

Yet, there was poor integration of communication skills within undergraduate curriculum and there were time restraints and lack of proper supervision and assessment of skills. With 2019 the Competency based medical education changed the norms of medicine in India to make it globally relevant. The AETCOM (Attitudes, Ethics, and Communication) component emphasizes the development of these skills in medical education [3]. Unfortunately, the most serious barrier to teaching actively and

interactively is the shortage of resources, including faculty members willing and able to facilitate and teach [4]. For large classroom settings where these barriers exist, traditional lectures become important. These didactic lectures have been criticized as being teacher-centric, resulting in slow learning ability, adding passivity [5-6].

Role-playing scenarios offer a valuable pedagogical approach to integrate AETCOM teaching into physiology education. Nukkad Natak engage students actively, encouraging participation and interaction, which enhances learning of AETCOM principles and depict real-life medical and ethical scenarios, helping students understand and apply AETCOM concepts in practical situations making them more sensitive to patient's needs [7].

Nukkad Nataks involve active learning, making the educational experience more engaging compared to traditional lectures, help them hone communication skills, empathy, and teamwork. This active participation helps in better retention of AETCOM concepts in a simulated environment. Utilizing the SIR Format in the traditional Indian art form resonates well with the local context and makes it culturally relevant enhancing students' understanding of societal health issues as well as explaining the role of doctors to them [8]. With a view of imparting AETCOM skills to our students and increase their engagement we introduced a culturally relevant format of Nukkad Natak in Phase I MBBS.

Material and Methods

Source of Data: MBBS phase I CBME batch students of JNMC (2023 -2024)

Study Design: A cross-sectional study (Mixed Methods).

Study Venue: Physiology -AETCOM session

Study participants: Phase I MBBS Undergraduate students enrolled in a physiology course 2023-2024 batch.

Inclusion Criteria: Phase I MBBS students (aged 18-20 years) who volunteer to be a part of AETCOM.

Exclusion Criteria: Students who remain absent during the session.

Sample Size: 200 Medical students of MBBS Phase I MBBS.

Sampling technique: Universal sampling.

Methodology: After obtaining Ethical clearance, (MDC/IEC/DOME/342) a voluntary written informed consent was taken from all participants. The Phase I MBBS students of batch 2023 -24 were taught AETCOM module. 1.1(what does it mean to be a doctor). Students were divided into small groups (n=25), a group leader was selected who had to co- ordinate with his group members about the competency and role they needed to play. A summarizer who had to summarize the roles of the doctor was elected. Students who acted as actors had to enact various roles of a doctor. The pre reading material was distributed

on WhatsApp by faculty. The objectives of the session were informed prior hand.

Preparatory Phase: Sensitization(S): There were discussions of the group along with the faculty, where videos on the roles to be played by a doctor were shown. Students participating in role-playing scenarios had to simulate clinical encounters. Scenarios covered a range of conditions and patient interactions, such as Clinician (taking a patient history, delivering a diagnosis, or discussing treatment options), Professional, leader, Communicator and Lifelong Leader. Students assumed the roles of healthcare professionals, patients, and family members, with instructors serving as facilitators or observers. The session was conducted over 3 hours. An initial anchoring lecture of around 20 minutes was to deliver the key principles of AETCOM along with the module information to the students.

Exploratory session: A brainstorming session was conducted in the class about what compelled them to enroll into MBBS program, were they aware of the responsibilities that are a part of the profession, expectations of the society. They were given a questionnaire as a pre-test to assess the prior knowledge on the module.

Panel discussion: To facilitate panel discussion we invited the vice principal, community medicine practitioners and medical teachers. The invited members briefed the students about their roles as an administrator, medical practitioners, community practitioners and life- long learners.

Immersion phase (I): Nukkad Naatak: Prior to the Nukkad Nataks Video clips from Bing.com on Good Doctor and Bad Doctor were shown to sensitize the students about the roles and expose them to both the nuances of the medical profession. The students were asked to internalize the scenarios and build it up in the local context. The students (n=25) enacted the various roles assigned to them along with Placards displaying their roles i.e- Each Group had to enact one role assigned to them (Clinician, Leader, professional,

Communicator, Lifelong learner). The scenarios the students enacted were left to their direction facilitated by some advice from the faculty. The scenarios were enacted in the college quadrangle. The entire paramedical Allied health students as well as other phases of MBBS were invited to observe the Nukkad Natak. This facilitated motivation of the students as well as reinforcements for the rest of the crowd related to the role played by doctors in society.

Summary and closure: The summarizer described the roles played by all the actors using structured debriefing sessions the students were provided opportunities for feedback and reflection.

Reflection (R): The students were asked to introspect keeping in mind the Nukkadnatak describe their learning experiences, analyze and plan an action of how he/ she would use it in future. The students were asked to reflect on the content and context of the scenario as well and they were rated using a 5 point Likert scale .The format for reflection included:

- 1) What happened? – What have I learned from this experience?
- 2) So what?? – What are the applications of this learning?
- 3) What next??? – What skills do I need to handle this kind of situation.

An internally validated and pre-tested questionnaire was used to collect feedback on perception from students. The questionnaire consisted of questions rated on a 5-point Likert scale (1 = strongly disagree, 2 = disagree, 3 = neutral, 4 = agree, and 5 = strongly agree). A feedback questionnaire was also collected regarding the utility of SIR format for AETCOM delivery (Agree, Neutral, Disagree).

A self-administered pre-test assessed the participants’ understanding of the topic, this along with inclusion of the topic as a question in the internal assessment was done to check the retention of the students following 3 weeks. The AETCOM competency questions were also asked in Final Summative university examinations for 6 marks (3 m in each paper 1 and 2). The following qualitative excerpts emerged from the reflective feedback and the following coding, reviewing the focused codes with themes been presented below (Table-1).

Questions/ Themes	Qualities/ Codes
Helped me understand the finer details of roles played by an IMG in society	Professionalism
Learnt what it is to communicate with the patients and caregivers	Communication
Learnt how to respect patients autonomy and not to coercive	Ethics
Understood how empathy has its role	Ethics
Understood how a doctor has to help patients make informed choices	Professionalism
Motivated to play the roles in the society	Professionalism
Understood how not to be judgmental in situations	Ethics
Discussed the importance of proper communication to avoid confusion	Communication
Questions	Roles
Understood how all important issues, diagnosis, prognosis need to be communicated	Communicator
How the doctor treats and looks after the health and management of patient	Physician
Discussed all pros and cons with the patients and relatives, helped reach a decision	Clinician
Understood how the doctor treats a patient and guides him for investigations and treatment options with other members of fraternity	Leader
Discussed the relevance of how a doctor should keep himself updated with recent advances in his field since medicine is ever evolving	Lifelong Learner

Statistical Analysis: The data was entered onto Microsoft excel sheet. The quantitative data was analyzed using IBM SPSS version 26 in the form of Mean SD. Student t test was used to analyze the differences between the pre and post values. P value was considered

significant if below 0.05. The qualitative data was coded and themes reviewed and thematically analyzed using QDA miner lite software.

Results

The survey shows majority of students support for patient-centered healthcare practices. A unanimous 100% believe doctors must be skilled in providing comprehensive information to patients and their families, emphasizing transparency. 93% agree doctors should inform

patients about treatment side effects, underlining the importance of informed consent. Majority (97%) support respecting patient autonomy, affirming patients' rights to informed decision-making. 99% advocate for doctors discussing treatment options extensively to reach consensus. Regarding staying updated on new treatments, 87% agree, with 13% neutral, suggesting varying opinions on the extent of necessary updates (table-2).

Questions	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
1) The doctor should be skilled enough to provide all the vital information to the patient/ relatives regarding disease condition	09	91	0	0	0
2) Doctors should inform the patients about the side effects of medications/ procedures?	90	03	07	0	0
3) Doctors should respect the patient's autonomy?	87	10	03	0	0
4) The doctor should discuss in length the various options therapeutic/ non therapeutic to reach a consensus	21	78	01	0	0
5) The doctor should keep himself abreast all the newer diagnostics/ treatment options and communicate with the other members of fraternity for a holistic treatment plan	13	74	13	0	0

Questions	Agree	Neutral	Disagree
Preparatory phase			
• Do you think the preparatory phase had all of the students involved?	94	06	0
• Were the objectives of the session clear prior to the class?	83	17	0
• Was there a dialogue between the faculty and you related to the role you are supposed to play?	88	12	0
Sensitization Phase			
• Did the brainstorming session and video clips help you identify various roles of a doctor in society?	97	03	0
• Did the panel discussion with administrators, community health teachers, physicians help you understand the roles better?	81	19	0
Immersion Phase			
• Do you think Nukkad Natak generated curiosity in you regarding the topic?	91	09	0
• Were the roles played and scenarios culturally relevant?	86	14	0
• Did the debriefing sessions be of any help	68	32	0
Reflective Phase			
• Do you think reflective writing helped you assimilate and plan your experiences?	79	21	0

Table no 3 shown there was high levels of satisfaction and effectiveness across most phases of the session. Preparatory and sensitization phases received strong agreement regarding student involvement, clarity of objectives, and effectiveness of instructional methods. In immersion phase, particularly the Nukkad Natak and culturally relevant scenarios, were highly rated for engagement and relevance. Majority of students found debriefing sessions and reflective writing beneficial, there were more neutral responses, suggesting potential areas for enhancement in facilitating deeper reflection and consolidation of learning.

Table no 4 shown the feedback overwhelmingly supports Nukkad Natak as highly engaging and effective in active learning, with 99% of respondents strongly agreeing on its ability to capture attention and foster participation, contrasting favorably with

traditional didactic methods. 89% of participants were actively involved in planning and role-playing scenarios during Nukkad Natak, indicating that this participatory approach enhances learning through practical application of concepts.

There is variability in the effectiveness of Nukkad Natak in conveying specific societal roles of doctors among Indian Medical Graduates (IMG), as shown by mixed responses: 58% agreed, 22% were neutral, and 20% disagreed. Interestingly, none of the respondents favored classroom lectures over Nukkad Natak for teaching AETCOM competencies, highlighting a clear preference for interactive and engaging learning methods. Majority (71%) agreed that Nukkad Natak help internalize the roles of IMGs, suggesting their effectiveness in facilitating understanding and adoption of professional roles.

Table-4: Feedback responses for comparison of Nukkad Natak versus didactic class

Questions	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
1) Do you think Nukkad Natak keep you engaged and are an active form of learning?	99	01	0	0	0
2) Were you involved in the planning and role playing scenarios?	89	11	0	0	0
3) Were you aware of the roles played by a doctor in the society in the context of Indian Medical Graduate	58	22	20	0	0
4) Do you think classroom lectures would have been a better format to teach AETCOM competencies	0	0	0	06	94
5) Do you think Nukkad Natak help you to internalize the roles played by an IMG	71	23	06	0	0

Table-5: Comparison of pre- test with post test scores, internal assessment and summative scores

	Pre test (5 marks)	Post test (5 marks)	Internal assessment (5 marks)	Summative assessment (6 marks)
Nukkad Natak	2.4 ± 9.01	4.6 ± 8.73	4.0 ± 7.77	4.6 ± 6.71
P value	0.004*		0.001*	0.01*

Table no 5 shown, comparison of the pretest cores with post- test as well internal assessment and summative scores shows a significant

improvement in the AETCOM scores following the Nukkad Natak*-significant, p value <0.05.

Discussion

Our study was conducted with the aim that our Phase I MBBS students understand the AETCOM module 1.1 what does it mean to be a doctor. To drive in the principles of AETCOM we used NukkadNataks along with video clips in the SIR format and around (99%) of the students found this platform more engaging than the didactic theory lectures [Table no 4]. (71%) of the students felt that NukkadNataks helped them internalize the roles played by a doctor in society [Table No 2 and 4]. Studies have shown that it is indeed important to inculcate soft skills into the undergraduates very early [9-10].

NukkadNataks are an invaluable tool in teaching AETCOM to medical students. They provide an engaging, practical, and culturally relevant method for developing essential attitudes, ethics, and communication skills. Integrating NukkadNataks into medical education can significantly enhance the overall learning experience and better prepare students for their professional roles and make them future ready to assume their roles [11].

Nukkad Nataks have the advantage that it allows everyone to play a role in it and even the introverts are given representation. It is an active format for learning since it stimulates all forms of learning styles including the kinesthetic ones. The traditional monotony of a classroom is broken away when the students depict their roles in society which is contextual and real- life mimicking. In our study reflections following the Nukkad Natak helped the students to internalize the principles of AETCOM and understand personal attitudes and behaviors. Observational learning as backed by behavioral science helps students to learn and understand internalize both the content and context [12]. NukkadNataks also enhance the affective domain and tap to the socio-cultural relevance [13].

Our study was structured on a SIR format with objectives and sensitization of the students who were better equipped to understand the core concepts of NukkadNataks and hence were immersed. The routine monotony of theory classes or calling some subject expert for teaching AETCOM was considered rather boring for the students and probably our Nukkad Natak acted like a lid opener. Our results are similar to a study

conducted where they have used video clips and role plays with a limited faculty and time to break in communication skills [14].

The use of video clips and panel discussion with experts (97% and 81% of students) of relevant roles played by an IMG in society added to the educational impact and appraised the students about the communication skills [15] [Table no3]. The use of brainstorming sessions (97%) and preparatory phase where the students worked towards a common goal oriented them towards team- work and social skills [16] [Table no 3].

Feedback from students provided insights into the effectiveness of Nukkad Natak as a teaching strategy and its impact on learning outcomes in the form of post-test scores, retention scores as well a significant retention shown in internal assessment and summative scores [Table no 5] The utility of SIR format had more than (90%) interested and reflective writing (79%) of the students learnt how to plan their experiences [Table no3].

Around than (71%) of the students felt that they were able to internalize the basic principles and module what it means to be a doctor and his/her role in the society, similar to another study which found a positive change in the perceptions of the students [17] [Table no4].

To our utter surprise we received a 100% attendance with no absenteeism showing huge participatory learning and massive engagements. This brings food for thought that this millennial gen Z is interested in activities where they are allowed to explore the possibilities, form their own learning paths and are self -motivated. The use of reflective writing helped us to understand whether the students understood the concepts and the utility of our T1 strategy [18].

The pedagogical approach of NukkadNataks will help students realize the importance of system-based practice, better communication skills among each other and members of society, adopt a professional approach while dealing with patients or their caregivers, and develop humanistic attributes [19-20].

Conclusion

Integrating Nukkad Nataks for teaching AETCOM Principles offers a dynamic and interactive approach to teach AETCOM skills. By engaging students in realistic situations, Nukkad Nataks provide opportunities to practice

communication, empathy, and ethical decision-making within the context of physiological care. As educators continue to prioritize the development of AETCOM competencies, role-playing remains a valuable tool to enhance the holistic education of healthcare professionals.

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References

1. Medical Council of India. Sensitization Program on Attitude and Communication Module (AT-COM).
2. Medical Council of India. Vision 2015. *MCI*. March 2011. [Last accessed on 2021 Jul 07] Available from: https://www.nmc.org.in/wp-content/uploads/2018/01/MCI_booklet.pdf
3. Medical Council of India, Competency based Undergraduate curriculum for the Indian Medical Graduate. *MCI*. 2018(1).
4. Goolsarran N, Hamo CE, Lu WH. Using the jigsaw technique to teach patient safety. *Med Educ Online*. 2020; 25:1710325.
5. Doymus, K. Teaching Chemical Equilibrium with the Jigsaw Technique. *Res Sci Educ*. 2008; 38:249-260.
6. Carpenter JM. Effective teaching methods for large classes. *Fam Consum Sci Res J*. 2006; 24:13-23.
7. Thorat K, Gujaria I, Kumar V & Prajapati K. Assessment of Empathy Training in Medical Education: Students' Perspectives on the AETCOM Module. *Educational Administration: Theory and Practice*, 2024; 30(4):5605-5608.
8. Jain S, Mahajan G, Mahajan N. SIR approach to teach and learn Attitudes, Ethics and Communication (AETCOM). *GAIMS J Med Sci*. 2022; 2(1):13-15.
9. Bosse HM, Nickel M, Huwendiek S, Jünger J, Schultz JH, Nikendei C. Peer role-play and standardised patients in communication training: A comparative study on the student perspective on acceptability, realism, and perceived effect. *BMC Med Educ*. 2010; 10:27.
10. Choudhary A, Gupta V. Teaching communications skills to medical students: Introducing the fine art of medical practice. *Int J Appl Basic Med Res*. 2015; 5(Suppl 1):S41-44.
11. Shankar PR. Using case scenarios and role plays to explore issues of human sexuality. *Educ Health (Abingdon)*. 2008; 21:108.
12. Fryling MJ, Johnston C, Hayes LJ. Understanding observational learning: An interbehavioral approach. *Anal Verbal Behav*. 2011; 27:191-203.
13. Zayapragassarazan Z, Kumar S, Kadambari D Record review of feedback of participants on attitude, ethics and communication module (AETCOM) proposed by Medical Council of India (MCI). *Education in Medicine Journal*. 2019; 11(1):43-48.
14. Lavanya SH, Kalpana L, Veena RM, Bharath Kumar VD. Role-play as an educational tool in medication communication skills: Students' perspectives. *Indian J Pharmacol*. 2016; 48:S33-S36.
15. Hurtubise L, Martin B, Gilliland A & Mahan J. To play or not to play: leveraging video in medical education. *Journal of Graduate Medical Education*. 2013; 5(1):13-18.
16. Charon R. The patient-physician relationship. Narrative medicine: a model for empathy, reflection, profession, and trust. *JAMA*, 2001; 286(15):1897-1902.
17. Gurtoo A, Ranjan P, Sud R and Kumari A. A study of acceptability & feasibility of integrating humanities based study modules in undergraduate curriculum. *The Indian Journal of Medical Research*. 2013; 137(1):197.
18. Savitha D, Anto T & Tv, S. Introducing reflective narrative for first-year medical students to promote empathy as an integral part of physiology curriculum. *Advances in Physiology Education*. 2021; 45(2):207-216.
19. Mitra J, Saha I. Attitude and communication module in medical curriculum: Rationality and challenges. *Indian J Public Health*. 2016; 60:95-98.
20. Yavari N. Does medical education erode medical trainees' ethical attitude and behavior?. *J Med Ethics Hist Med*. 2016; 9:16.

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