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Enhancing soft skills through role-play: A pilot study in medical training

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I. INTRODUCTION

Soft skills help a person to boost his or her own performance. They are necessary for professional development. Effective communication and decision making are an integral part of good clinical care. Introduction to soft skills during undergraduate training helps students to appreciate and learn effective interpersonal communication with patients and their families. Soft skills training was not a part of academic curriculum in formal traditional medical training. (Sancho-Cantus et al., 2023).

However, since 2019, AETCOM module was added in medical profession in India, in which students need to learn attitude, ethics and communication (Medical Council of India [MCI], 2018). In addition to verbal communication, non-verbal communication including body language, eye contact, facial expression, touch and gestures are equally important in building trust in doctor-patient relationships. In order to inculcate these soft skills in their future profession, students need to practice these skills again and again.

Various professional bodies and medical students have revealed the need for soft skills training in the curriculum (Modi et al., 2016). Integrating these soft skills with clinical skills training is a big challenge. The concept of role play has been widely used to introduce soft skills in medical profession. Role play promotes active learning among the students and motivates them to work as a

team. In contrast to lectures, students get completely involved while performing the act during the role play. This enables them to retain and remember the concepts for longer duration. Role play helps the students to have an in-depth understanding of the topic at hand as they are made to think, script and act out the complete scenario on their own. (Goothy et al., 2019). Role play promotes better understanding and leaves an impact not only amongst the participating students but also in peers who are observing them (Rønning & Bjørkly, 2019). The current study aimed to evaluate effectiveness of role play in nourishing various soft skills in the first-year medical students.

II. METHODS

An interventional study was conducted at a teaching medical institute in Western Maharashtra, India. Ethics clearance from the Institutional Ethical Committee was taken before the commencement of the study (Reference Code: I.E.S.C./159/2022). Selection of participants was purely on a voluntary basis.

A. Pre-Role-Play Self-Assessment of Skills

Topics for role play were given 15 days prior to role play. Five students gave verbal consent for this study. The study procedure was explained to the participants. Topics were given as shown in Appendix 2. They wrote their own script for the role play. Pre-test was conducted through Google form which included following types of questions related to various skills like communication,

interpersonal, intellectual, self-management and learning. Pre-validated questionnaire was adapted from the website of College of Physiotherapists of Ontario which was modified and rectified by senior faculties as per the need of our study.

This questionnaire allows students to self-assess their own skills so that they know where they may need to improve. Each question has 3 columns as A, B & C. Each column should be filled per the instructions given below as shown in supplementary table (Appendix 1).

1. Column A

How important is the skill for the participant that he/she thinks should possess/acquire? Need to write the number as per the scale given below:

- 6 - very important
- 5 - important
- 4 - slightly important
- 3 - slightly unimportant
- 2 - unimportant
- 1 - very unimportant

2. Column B

Where does participant see himself/herself in already possessing the following skills (i.e., his/her self-assessment of present skill level)? Need to write the number as per scale given below:

- 6 - Expert, no need for further training
- 5 - Expert, needs self-training
- 4 - Good, needs occasional training from experts
- 3 - Average, needs frequent training
- 2 - Poor, needs regular training
- 1 - Bad, needs handholding and training

3. Column C

Participants need to subtract column B number from column A number (column A – column B). The highest number in this column C shows a major disparity between what he/she thinks about the importance of a particular skill and its current expertise level. These are the skills where participants need to improve whenever she gets opportunity in future.

B. Role Play Enactment Sessions (Intervention)

A total of 3 role plays were enacted by the participants focusing on-bad followed by good 1) attitude, 2) behavior and 3) communication of doctor with patients as per topics given to them (Appendix 2).

C. Post-Role-Play Self-Assessment of Skills

Post-test was conducted for participants using the same questionnaire.

1. Statistical Analysis

Scores of pre-test and post-test were copied into excel sheet and data was analysed by paired *t*-test using Primer of Biostatistics software, version 7.0.

III. RESULTS

Mean score of post-tests in communication skill (0.35 ± 0.14) was highly reduced compared to pretest (2.64 ± 0.36) and was statistically significant ($p < 0.0001$ ***).

Mean score of post-tests in interpersonal skill (0.5 ± 0.20) was highly reduced compared to pretest (2.55 ± 0.19) and was statistically significant ($p < 0.0001$ ***).

Mean score of post-tests in self-management skill (0.54 ± 0.25) was highly reduced compared to pretest (1.33 ± 0.21) and was statistically significant ($p < 0.0001$ ***).

Mean score of post-tests in intellectual skill (0.67 ± 0.39) was also reduced compared to pretest (2.73 ± 0.46) and was statistically significant ($p = 0.002$ **).

Mean score of post-tests in learning skills (0.5 ± 0.31) was also reduced compared to pretest (1.32 ± 0.30) and was statistically significant ($p = 0.002$ **).

Self-assessed improvement of communication skills, interpersonal skills and self-management skills by the participants in role play showed highly significant results (Table 1).

SI No	Skill		Mean (SD)	SEM	95% Confidence Interval		t	dF	p
					Upper Limit	Lower Limit			
1	Communication (Q1 – Q5)	Pre-test	2.64 (0.36)	0.16	1.99	2.59	21.5	4	<0.0001***
		Post-test	0.35 (0.14)	0.06					
2	Interpersonal skills (Q6-Q9)	Pre-test	2.55 (0.19)	0.09	1.88	2.22	37.9	3	<0.0001***
		Post-test	0.5 (0.20)	0.10					
3	Intellectual skills (Q10-Q12)	Pre-test	2.73 (0.46)	0.27	1.67	2.47	22.2	2	0.002**
		Post-test	0.67 (0.39)	0.22					
4	Self-Management Skill (Q13-Q18)	Pre-test	1.33 (0.21)	0.08	0.59	0.99	10.1	5	<0.0001***
		Post-test	0.54 (0.25)	0.1					
5	Learning skills (Q19-Q23)	Pre-test	1.32 (0.30)	0.14	0.51	1.13	7.4	4	0.002**
		Post-test	0.5 (0.31)	0.14					

Data presented as mean of scores \pm SD, p- value calculated by paired *t*-test, p*** – highly significant & p** – significant

Table 1. Self-assessed improvement of various skills by the participants in role play

IV. DISCUSSION

Present study showed self-assessed improvement in communication skills, interpersonal skills and self-management skills due to role play in the participants which was highly significant. Intellectual skills and learning skills also improved significantly in this study. Role play promotes active learning. Participants write scripts on their own, think about the characters, plan for acting and do rehearsal also. Role play helps to build leadership qualities and teamwork amongst participants (Goothy et al., 2019). In order to provide good quality health care, soft skills training is necessary to strengthen these skills in professional training. Improvement in soft skills like communication, interpersonal, intellectual, self-management & learning skills enhances academic performance as well as overall professional development of the student (Sancho-Cantus et al., 2023). Cognitive and psychomotor skills are also enhanced through such activities (Goothy et al., 2019). Such soft skill training also improves coping abilities during disturbances as seen in COVID 19 pandemic and also reduces the incidence of anxiety and depression (Sancho-Cantus et al., 2023).

Only five students volunteered to participate in this study. Improvement in these skills was based on self-assessment. Due to small sample size, social desirability bias and self-report bias, statistical significance may vary and might affect the generalisation of the findings. But this pilot study can be extended with large sample size for getting more appropriate results. Focus group discussions, direct observations and reflective essays might give more in-depth information in future studies.

V. CONCLUSION

Soft skills like communication skills, interpersonal skills and self-management skill may be improved along with Intellectual skills and learning skills by the role play in students of medical profession. Role play can be used as an effective tool to enhance soft skills in the students. Such studies should be facilitated in larger population.

Notes on Contributors

Seema Tanaji Methre was involved in conceptualisation, methodology, project administration and supervision, data analysis and writing (original draft and editing).

Ramya Jayakumar was involved in conceptualisation, methodology, project administration and supervision, data analysis and writing (editing).

Sugata Sunil Jadhav was involved in methodology, project administration and supervision, data analysis and writing (editing).

Chhaya Anil Saraf was involved in project administration and supervision.

Rajkumar Sansarchand Sood was involved in conceptualisation, methodology and writing (editing).

Ashwini Namdeorao Patil was involved in conceptualisation, methodology, data analysis and writing (editing).

Ethical Approval

This study was reviewed by the Institutional Ethics Sub-Committee Committee from the Dr. D. Y. Patil Vidyapeeth, Pune (Deemed to be University), Dr. D. Y. Patil Medical College, Hospital & Research Centre, Pimpri, Pune with an exemption from IRB review and the approval to conduct research at institute (Reference Code: I.E.S.C./159/2022).

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Declaration of Interest

The authors declare no conflicts of interest.

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Appendix 1: Supplementary Table - Questionnaire used for pre-test and post-test for self-assessing various skills in participants of role play

Q No.	List of various skills	A Importance High low 6 5 4 3 2 1	B Present skill level High low 6 5 4 3 2 1	C Improvement in skills (A minus B)
I	Communication Skills			
1.	ORAL ability to communicate effectively and appropriately on a one-to-one basis			
2.	ORAL PRESENTATIONS ability to present ideas orally to an audience; to discuss and argue a case			
3.	LISTENING willing and able to hear and actively comprehend verbal messages without undue blocking through, for e.g., prejudice or assumptions			
4.	READING ability to absorb written material sufficiently rapidly and at a level of accuracy and completeness appropriate to the need			
5.	INFORMATION SKILLS ability to seek, store, retrieve, synthesise, use and present information in a manner appropriate to the objectives you are pursuing			
II	Interpersonal Skills			
6.	SOCIAL COMPETENCE ability to relate to others; socially at ease with people from a variety of backgrounds			
7.	ASSERTIVENESS know what you want and be able to negotiate for it in a way which is assertive rather than aggressive			
8.	GROUP/TEAMWORK Ability to cooperate with others and make a variety of contribution (e.g., ideas organisation) in a joint venture			
9.	LEADERSHIP ability to manage, guide, facilitate a group or activity so as to maximise its success and the contribution of participants			
III	Intellectual Skills			
10.	USE OF CREATIVITY ability to use your imagination and creativity fully in order to innovate, develop ideas to carry out plans			
11.	CRITICAL/ANALYTICAL THINKING ability to consider issues from a range			
12.	PROBLEM-SOLVING ability to confront obstacles in pursuing an objective and arrive at positive ways of overcoming them			
IV	Self-Management Skills			
13.	SELF-ASSESSMENT ability to evaluate your own strengths, weaknesses, progress and future learning objectives			
14.	SELF-CONFIDENCE trust in your own worth and ability sufficient to enable you to make a full contribution			
15.	SELF-PRESENTATION ability to demonstrate in an appropriate manner, in oral, written and physical form, the qualities you possess			
16.	RESPONSIBILITY ability to act or decide on your own, without supervision			
17.	SELF-DISCIPLINE ability to manage yourself in reaching goals and carrying out tasks			
18.	PROACTIVE APPROACH ability to initiate activities without needing prompting from others			
V	Learning Skills			
19.	ACTIVE LEARNING willingness to take an active role and take responsibility for your own learning			
20.	LEARNING DIAGNOSIS ability to diagnose what you know and what you don't know			
21.	LEARNING PLANNING ability to plan learning and to set targets			

22.	LEARNING RESOURCES ability to identify resources for learning (people, books, software, etc.)			
23.	LEARNING REFLECTION ability to reflect on learning			

Appendix 2: Topics given for Role-Play

Sr. No	Role play exhibiting	Topic
1.	Bad attitude	Doctor keeps on interrupting patient and not listening
2.	Bad behavior	Doctor uses medical jargon and gets angry on asking for second opinion
3.	Bad communication	Doctor is distracted and talks down to the patient