A Study to Evaluate Effectiveness of Role Play as A Teaching Learning Method for Communication Skills among Phase II Undergraduate Medical Students

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Abstract:

Introduction: Good communication skill is directly linked with positive outcomes in all the aspects of patient care.

With the introduction of new curriculum in CBME there is inclusion of AETCOM module as well as competencies related to communication skills "Role play" is widely used as a teaching learning method to develop communication skills to enhance cognition, psychomotor skills, and affective domains in learners.

The present study was undertaken to determine the perceptions of Phase II undergraduates about the use of role play as educational tool for communication skills.

Methodology: It was a prospective; questionnaire based observational study done in department of Pharmacology on 100 2nd phase MBBS students. In which two competencies were finalized by the subject experts, from communication topic in pharmacology for role play session. The students were divided in two groups of 50 each and it further divided in 5 subgroups having 10 students in each subgroup to perform role play. Group I acted role play for one competency and Group II performed as observer for second session a crossover was done with 2nd communication competency. A pre and posttest in the form of MCQ was taken before and after role play respectively. At the end of the role play student and faculty feedback were taken by prevalidated questionnaire contain both close-ended (using 5-point Likert scale) and open-ended questions to know their perceptions for role play in Pharmacology as a tool for communication skills. Overall faculty and students' perception was also taken on VAS.

Results: The results showed that students preferred role play as the preferred instructional tool to teach communication skills. Pre and post test score comparison showed significant improvement with $p < 0.001$. Impression of actor students was that 98% agreed or strongly agreed that role play assisted them in learning communication skills, and almost all (99%) enjoyed the simulation. 87% thought simulation covered critical content necessary for the mastery of medical curriculum. 91% considered that they understood how to use simulation activities to learn critical aspects of these skills. The overall acceptance of role play on Likert scale by actor students was around 8.0 on a scale of 0 to 10. The impression of the observer group students via Kalamazoo scale about the roleplay was that 91% agreed or strongly agreed that role play helped in learning communication skills to establish the relation among patients, 90% felt that it improves ability to communicate accurate information to patients. The students response for open ended questions was like "It was a very efficient way of learning; it was easy and fun filled experience to get knowledge." 100% of faculty agreed to strongly perceived that role play helped teaching communication skills with more objectivity

Conclusion: Almost all the students and faculty felt that role play can be used as an effective tool to improve the communication skills and it should be started at the foundation level. Besides the communication skills, knowledge was also enhanced and It imparts the good doctor patient relationship. This would help in achieving one of the IMG goals, to be a physician of the first contact with good communication skills.

Keywords: Role play, Communication skills, Pharmacology, Kalamazoo scale, simulations.

Introduction

Good communication skill is fundamental in improving doctor patient relationship which results in improved compliance, builds confidence, positive outcomes in patient and also lead to reduction of medical litigation due to perceived medical negligence.[1] and is an essential component for medical practice. Traditional undergraduate medical teaching specifically in phase I and Phase II focuses on teaching theoretical aspects of topics. With the introduction of new curriculum in CBME there is inclusion of AETCOM module as well as competencies related to communication skills, which need to be addressed and taught to undergraduates with real case scenarios or simulations to make them doctors of greater competence.[2]

It becomes necessary to create a strong foundation medical professional in communication skills because this is the most ignored aspect of medical education.[3] In past it has been seen an increase in both the number of litigations on doctors and agitations by doctors on mass levels. Such things are not only unacceptable but also deplorable and shameful for our prestigious medical profession.[1] Poor communication between doctors and patients is an important attributing factor to poor health care system. [4,5]

"Role play" as a teaching learning method can be an effective method to enhance cognition, psychomotor skills and affective domains in learners. [6] It help students experience and understand both the doctor's as well as patient's perspectives and to learn the complexity of the doctor patient relationship.[1] The idea of role-play, in its simplest form, is that of putting someone to imagine that they are either themselves or another person in a particular situation. They are then asked to behave exactly similar to the feel of that person would. As a result of doing this they, or the rest of the class, or both, will learn something about the person and/or situation.[7] Though mostly "Role play" is used as an instructional tool but there are few studies which has find "Role play" as an educational teaching learning tool to enhance understanding of all three domains among medical students.[8] The present study was undertaken to determine the perceptions of Phase II undergraduates about the use of role play as educational tool for communication skills.

Ethical justification of the study:

1. This study was planned out keeping in mind the principle of essentiality of medical research based on the observation that teaching methods and taking reviews of students in form of questionnaire will not affect any ethical issue.
2. The present study has not involved any intervention.
3. No invasive or non-invasive procedures have been done on the study participants.
4. All the principles of the good clinical practices have been followed.
5. All the participating students have been informed regarding the study and consent will be taken from all of them.

Aims & Objectives:

1. To assess effectiveness of Role play as a tool to teach basic communication skills to IInd year students in Pharmacology
2. To assess perception of students for using role play to teach communication skills.

Methodology:

Study Design

The present study was a prospective; questionnaire based observational study conducted by the Department of Pharmacology, Government Medical College Pali (Rajasthan). Study was in accordance with the principles of Good Clinical Practice (GCP) and declaration of Helsinki with its subsequent amendments. And all the participants have been given all the appropriate information regarding study related procedures and consent were taken from all of them.

Two competencies were finalized by the subject experts in the department, from communication topic in pharmacology were 1. PH5.1 Communicate with the patient with empathy and ethics on all aspects of drug use, and 2. PH5.3 Motivate patients with chronic diseases to adhere to the prescribed management by the health care provider. The basic idea of these competencies for the role play was to teach communication skills to the student in such a way that there should be no misinterpretation and compliance related issues occur. "Kalamazoo Essential Elements Communication Checklist" (adapted).[9] [Annexure 1] and Hober CL 2012 "Dissertation" [10] were considered as the reference for designing and preparing the module of role plays which was briefed to students. Role play involved 4 stages: briefing, running, self-closure, and debriefing.

A total of 100 medical students of 2nd professional MBBS course were enrolled for the study as this is the base level to strengthen their roots in communication skills as they are already been exposed to clinical scenario via clinical postings.
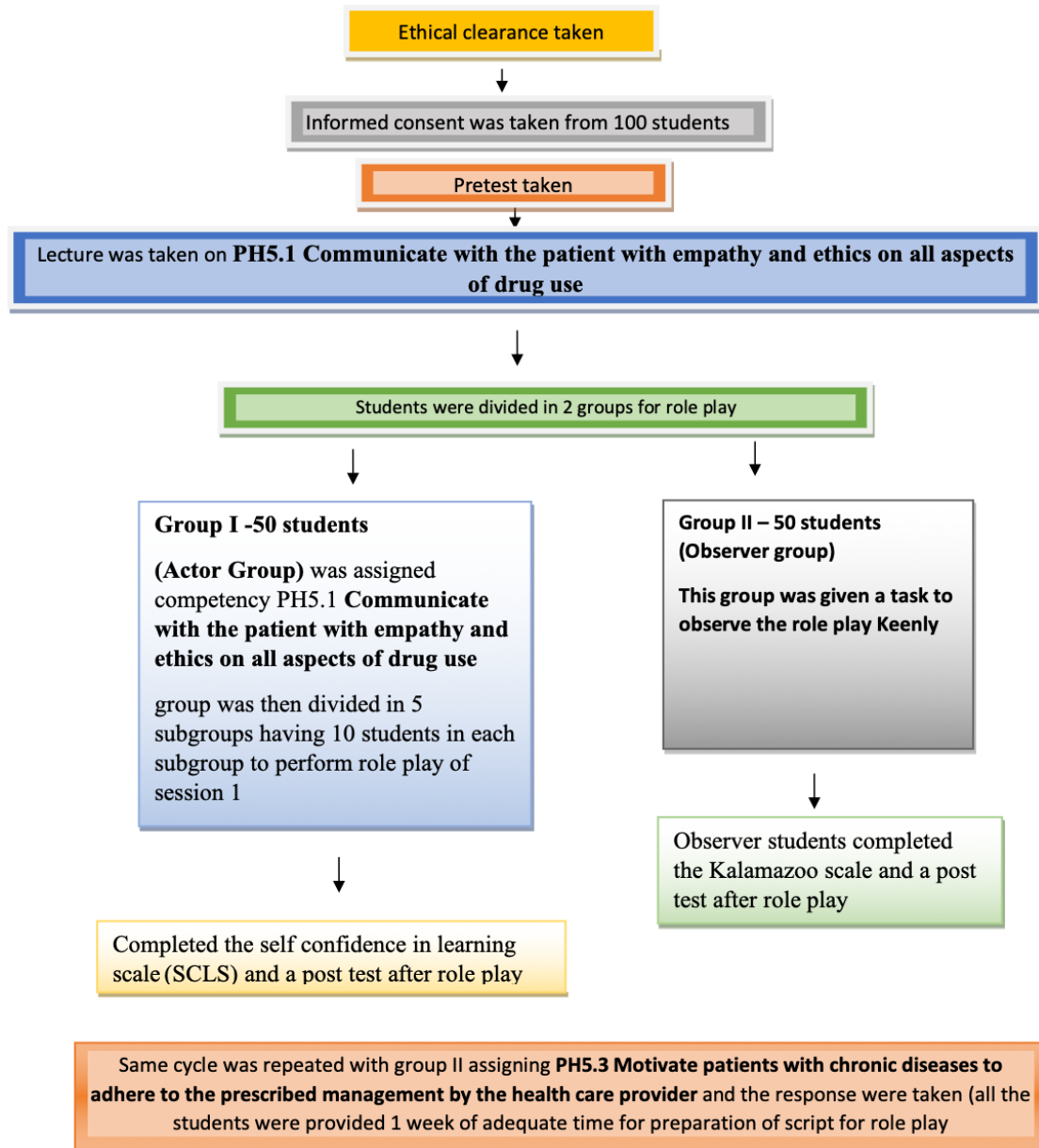
Written informed consent was obtained from the students.

All 100 students were divided in 2 groups with 50 students in each group as group I and group II. Each group was then divided in 5 subgroups having 10 students in each subgroup to perform role play. One week in advance all 100 students were being asked to give a pretest (MCQ) after which they were introduced to communication competencies and lecture was taken before role play. Group I was assigned competency PH5.1, group II was assigned competency PH5.3 for script writing of role play on subsequent practical days respectively. Methodology shown in flowchart 1. Two Guiding faculties were assigned to each role play team and they were moderating the students in the conduct of role play. All the role-play scripts were in Hindi for actor students and the remaining students of the batch became observers. Each subgroup of 10 students was allocated 20 minutes to perform. The faculty served as facilitators for role play team. The facilitator was charged with channelling the role play discussion and could terminate the play when the objectives have been met or the emotional climate calls for intervention. At the end of the plays there was a debriefing session. Similarly next communication competency was also been covered for role play. Thereafter all the students were filled the post role-play session questionnaire.

The students playing act completed the self confidence in learning scale [11] (SCLS) (Annexure II) while the observer students completed the Kalamazoo scale.[9] This is an important procedure to ensure the genuineness of their responses as the questions required their insight on their experience during the performance of the role-play.

Flowchart 1:

Ethical clearance taken

↓

Informed consent was taken from 100 students

Pretest taken

Lecture was taken on **PH5.1 Communicate with the patient with empathy and ethics on all aspects of drug use**

↓

Students were divided in 2 groups for role play

Group I -50 students

(Actor Group) was assigned competency PH5.1 **Communicate with the patient with empathy and ethics on all aspects of drug use**

group was then divided in 5 subgroups having 10 students in each subgroup to perform role play of session 1

↓

Completed the self confidence in learning scale (SCLS) and a post test after role play

Group II – 50 students (Observer group)

This group was given a task to observe the role play Keenly

↓

Observer students completed the Kalamazoo scale and a post test after role play

Same cycle was repeated with group II assigning **PH5.3 Motivate patients with chronic diseases to adhere to the prescribed management by the health care provider** and the response were taken (all the students were provided 1 week of adequate time for preparation of script for role play

The self confidence in learning scale (SCLS) and the Kalamazoo scale questionnaire contain both close-ended (using 5-point Likert scale as a scale ranging from 1=strongly disagree to 5=strongly agree)[12] and open ended questions to know their perceptions for role play in Pharmacology as a tool for communication skills.

Results

A total of 100 second year (3rd semester) MBBS students actively participated in the role-play project, with all students successfully submitting their filled questionnaires. Six faculties were present during the role-play sessions and provided feedback through questionnaires. The findings revealed a strong preference among most students for using role play as a tool for teaching communication skills.

The feedback from actor students, as assessed through the Self-Confidence in Learning Scale (SCLS), is summarized in Table 1 and Figure 1.

Approximately 98% of the students either agreed or strongly agreed that role play significantly aided them in learning communication skills, with nearly all participants (99%) expressing enjoyment in the simulation. About 87% believed that the simulation covered crucial content essential for mastering the medical curriculum, and 91% felt they understood how to utilize simulation activities for learning critical aspects of these skills. Almost 99% of the students indicated that the simulation objectives were clear and easy to comprehend. Overall, actor students rated their acceptance of role play at approximately 8.0 on a Likert scale ranging from 0 to 10.

Table 1: Impression of actor students about role play session for communication skills (SCLS score)

Question	Strongly agree (SA)	Agree (A)	Total (SA+A)	Neutral (N)	Disagree (D)	Strongly disagree (SD)	Total (N+D+SD)
Helpful teaching tool in simulation	67	33	100		1		1
It provides variety of learning materials and activities to promote learning	52	46	98	2		1	3
I enjoyed the simulation	49	50	99	1		1	2
Quite motivating and learned	49	47	96	4	1		5
This method suits me	45	50	95	4	1	1	6
I am mastering the content of the simulation activity that was taught to me	41	55	96	5			5
This simulation covered critical content necessary for the mastery of medical curriculum	41	47	88	12	1		13
I am developing the skills and obtaining the required knowledge from this simulation to perform necessary tasks in a clinical setting	49	48	97	4			4
My instructors used helpful resources to teach the simulation	41	54	95		1	5	6
It is my responsibility to learn what I need to know from this simulation activity	61	40	101				0
I know how to get help when I do not understand the concepts covered in the simulation	41	50	91	7	1	2	10
I know how to use simulation activities to learn critical aspects of these skills	35	57	92	7	1	1	9
The objectives for simulation were clear and easy to understand	53	47	100			1	1

SD-strongly disagree, D-Disagree, N-neutral, A-agree, SA-strongly agree

Figure 1 SCLS (by actor students)

THE OBJECTIVES FOR SIMULATION WERE… — 100 / 9 — 92

I KNOW HOW TO GET HELP WHEN I DO NOT… — 10 — 91 / 0 — 101

MY INSTRUCTORS USED HELPFUL RESOURCES… — 6 — 95 / 4 — 97

THIS SIMULATION COVERED CRITICAL… — 13 — 88 / 5 — 96

THIS METHOD SUITS ME — 6 — 95 / 5 — 96

I ENJOYED THE SIMULATION — 2 — 99 / 3 — 98

HELPFUL TEACHING TOOL IN SIMULATION — 0 — 100

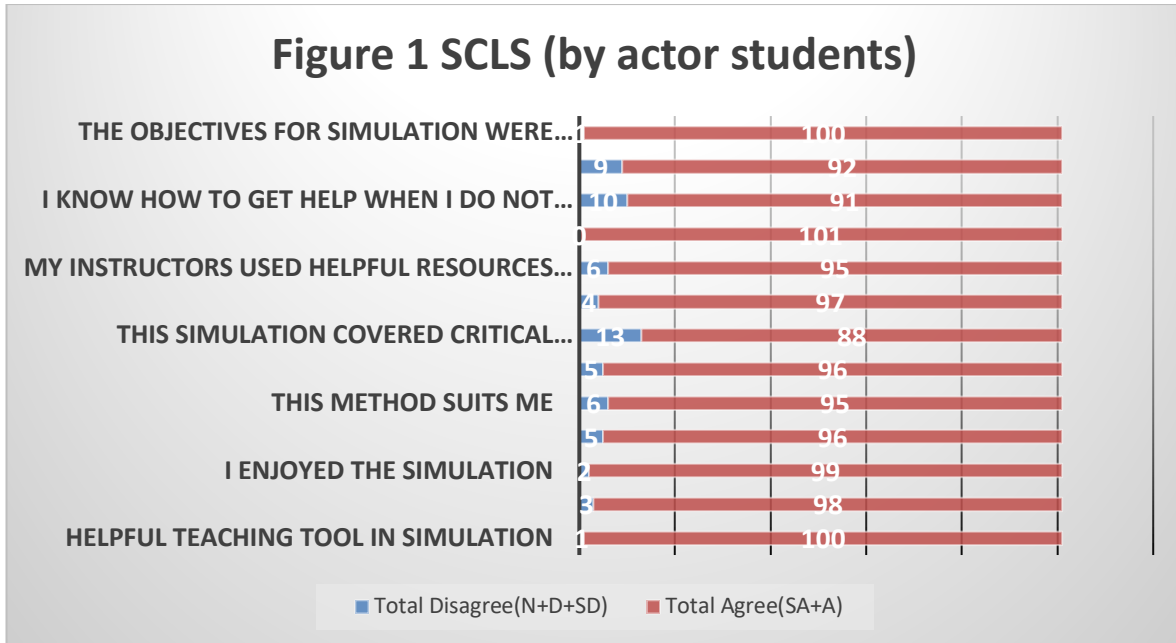■ Total Disagree(N+D+SD)   ■ Total Agree(SA+A)

Figure 1: SCLS (by actor students)

The impression of the observer group students via Kalamazoo scale about the role-play are as shown in Table 2 and Figure 2. About 91% agreed or strongly agreed that role play helped in learning communication skills to establish the relation among patients, 90% felt that it improves ability to communicate accurate information to patients.

Table 2: Impression of observer students about role play session for communication skills (Kalamazoo score)

Question	poor	fair	Total	good	v good	excellent	Total
overall ability to establish relationship	1	2	**3**	46	31	19	**96**
Overall ability to open the discussion	1	**7**	**8**	38	31	22	**91**
Overall ability to seek/elicit further information	0	11	**11**	36	29	23	**88**
Overall ability to understand the patient's and family's perspectives	0	14	**14**	43	27	15	**85**
Overall ability to share information	0	5	**5**	29	39	26	**94**
Overall ability to reach agreement	3	7	**10**	44	29	16	**89**
Overall ability to communicate accurate information	1	**8**	**9**	36	36	18	**90**
Provide closure	0	5	**5**	34	42	18	**94**

Figure 2: Kalamazoo score (by observer group)

PROVIDE CLOSURE — 5 — 94

COMMUNICATE ACCURATE… — 9 — 90

REACH AGREEMENT — 10 — 89

SHARE INFORMATION — 5 — 94

UNDERSTAND THE PATIENT'S AND… — 14 — 85

SEEK/ELICIT FURTHER INFORMATION — 11 — 88

OPEN THE DISCUSSION — 8 — 91

ESTABLISH RELATIONSHIP — 3 — 96

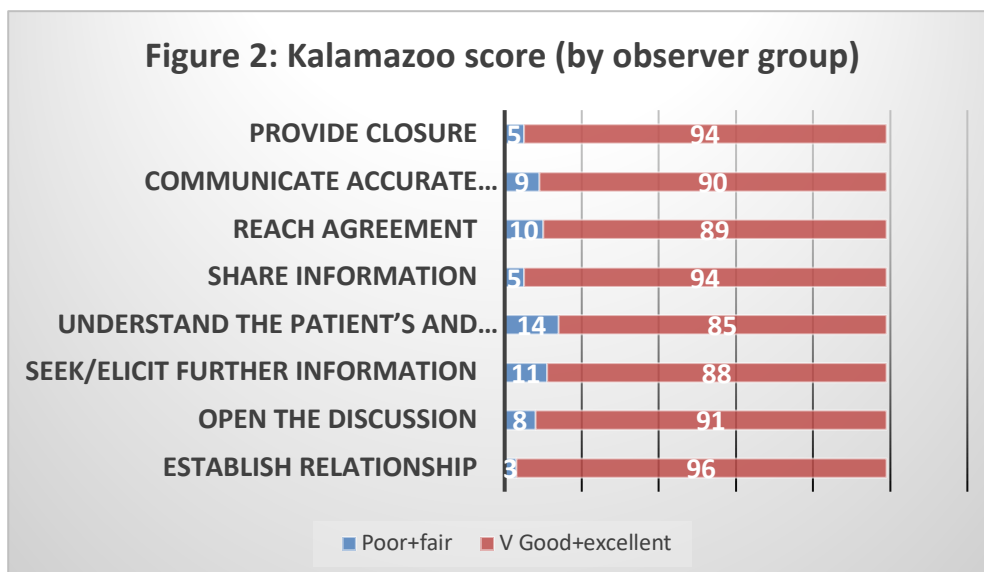■ Poor+fair   ■ V Good+excellent

Figure 2: Kalamazoo Score (By Observer group)

Feedback from students for the open-ended questions

"It was a very efficient way of learning; it was easy and fun filled experience to get knowledge." "I wish other departments would also do role plays of how they communicate about diseases." "This was very helpful for us to learn the situation and condition of the patient" "we really had fun preparing the role play and it helped us to learn hard topics easily" "role play is the best method of learning with easy way of concepts building" "Role play was a great experience and we could able to understand the common problems or distractions faced by patients and how to rectify it"

The faculty's perspectives on the use of role play in teaching communication skills are depicted in Table 3 and Figure 3. All faculty members unanimously agreed or strongly agreed that role play effectively facilitated the teaching of communication skills with a more empathetic approach. Furthermore, every faculty member expressed confidence that the students' attitudes towards patients would notably improve in clinical settings as a result of incorporating role play into the curriculum.

In addition, all faculty members affirmed that role play enhanced student participation and made the teaching process more engaging. There was unanimous agreement among the faculty that this approach contributed to a more interesting learning experience and was beneficial for better retention of clinical features.

A noteworthy 83.33% of faculty members believed that role play could be extended to other departments for teaching communication skills and emphasized its inclusion in undergraduate education to impart the affective component effectively.

Table 3: Faculty impression for role play

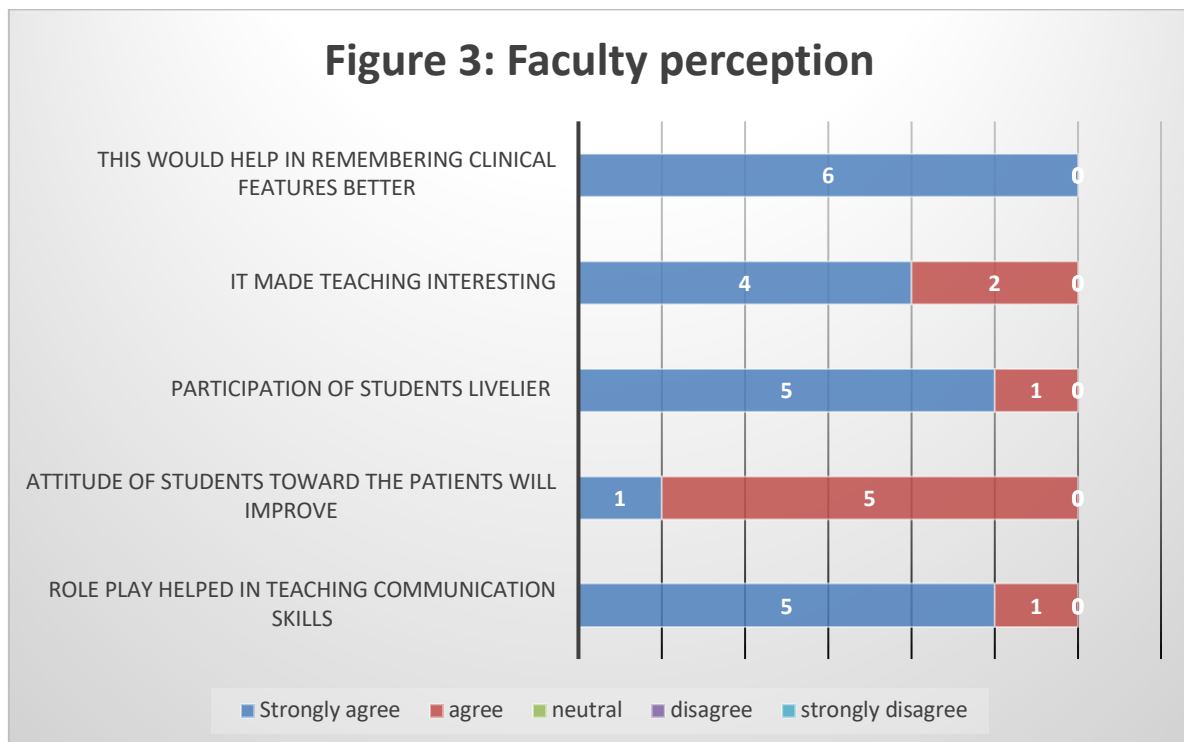| Question	Strongly agree	agree	neutral	disagree	Strongly disagree
role play helped in teaching communication skills	5	1	0	0	0
attitude of students toward the patients will improve	1	5	0	0	0
participation of students livelier	5	1	0	0	0
it made teaching interesting	4	2	0	0	0
this would help in remembering clinical features better	6	0	0	0	0

Figure 3: Faculty perception for role play

Feedback from the faculty for the open-ended questions "faculty being busy with other academic/administrative tasks, there is less time to teach the students communication skills." It takes a lot of time and efforts to take one session. "First, the faculty should be sensitized how to teach communication skills correctly, as most of us have learned it by observing our teachers and seniors." Comparison of pretest and post-test MCQ score to role plays showed statistically significant improvement in the knowledge (P < 0.001) for all the questions [Figure 4]. Even on the likert scale the score was significantly higher (p> 0.005%) for acceptance of this tool as a routine tool for teaching especially for teaching communication skills.

Discussion

Our present MBBS curriculum does not address learning of communication which is the backbone of every doctor–patient interaction. Students usually learn this affective domain from either observing their teachers or their seniors and the process of learning may remain incomplete.

Role play has emerged as one of the teaching learning tool to impart communication skills in students to deal with realistic clinical situations where they actually cannot encounter that particular scenario in real world population. Simultaneously role play also provide the chance to provide feedback and student can correct errors at the same time.[12]

Our study showed that students scored better in the post session MCQs which is similar to Nested D and Kaufman DM study's findings. [13, 14] Majority of our students had a positive impression of role play and felt that it should be inculcated as regular teaching method to teach communication competencies and be adopted by other departments as well for training undergraduate students. Similar, to the findings of Nair BT [1] majority of students felt that the role play can help them to understand the correct way of behaviour and attitude required to communicate with their patients and hence will also improve compliance and therapeutics. Perception of the students and faculty regarding role play in teaching communication skills was like in other studies [15, 16]. Stevenson and Sander[17] found that majority of the students had a negative perception about role play in contrary to our study in which 90% of our students had a positive impression of role play and felt that it improves their ability to make patient understand better.

Based on Scott's premise role-plays allows students to "inhabit the issue and think beyond their own perspectives" that is, role-plays make activities more real and engaging for students.[18] Similarly, in another study Wheeler S. stated that role-play exercises typically involve fewer complex interactions and more in touch to real world when compared to other types of communicative activities.[19]

Analysis:

The data was analysed on MS Word and Excel and IBM's SPSS software for Windows, Version 22.0. To assess the reliability of the questionnaire collected from students Cronbach's alpha coefficient test was used.

Mann whitney U test -non parametric was used for (Likert scale) to assess questionnaire score. Descriptive study data was analysed by proportion and percentage analysis.

Conclusion

Overall, our study findings suggested role play as an effective strategy for increasing the communication skills and critical thinking power of students, as almost all the students and faculty felt that role play can be used as an effective tool to improve the communication.

It shows us path to introduce it formally in undergraduate medical curriculum and by applying this technique faculty can be able to make their teaching style more creative and communal and these way students will also pay more attention to learn a new skill even from the base level.

This will also increase the confidence of patients in medical students during their clinical postings and it can be helpful to build strong foundation for ethics and good communication

Besides the communication skills, knowledge was also be enhanced and It imparts the good doctor patient relationship. This would help in achieving one of the IMG goals, to be a physician of the first contact with good communication skills

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