Role Play versus Small Group Discussion in Teaching Prescription Communication Skills: A Comparative Study on students of Phase Two of the Bachelor of Medicine and Bachelor of Surgery (MBBS) Course

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Introduction: Inadequate prescription communication skills of the medical graduates lead to poor therapeutic outcome and increased burden on the healthcare system. This gap has to be addressed through effective methods for teaching prescription communication skills to medical students. This study compared the effectiveness of Role play and Small Group Discussion (SGD) in teaching prescription communication skills to students of Phase Two of the Bachelor of Medicine and Bachelor of Surgery (MBBS) course.

Methods: This was a prospective interventional study done in the Department of Pharmacology affiliated to the Department of Surgery at a Tertiary Care Centre in North Kerala for a period of 3 months from March 2021 to May 2021. After obtaining ethical clearance and informed consent, students of Phase Two of the MBBS course students (n=60) were selected by convenience sampling and divided into 2 groups by simple randomisation. The groups were taught prescription communication skills by Role play and SGD, respectively. Each group received six independent interventions on different topics. An Objective Structured Clinical Examination (OSCE) was conducted 1 week after each session for both groups. At the end of six sessions, feedback on the sessions was collected through a perception questionnaire. Quantitative data were compared using independent t-test. Ordinal data were expressed as percentages. Statistical analysis was done using online statistical calculators. P<0.05 was considered statistically significant.

Results: Mean OSCE scores for each session was significantly higher in the Role play group than the SGD group. Mean total OSCE score of the Role play group was significantly higher than the SGD group (60.39±6.33, 47.79±4.27, P<0.001).

Conclusion: Role play is more effective than SGD in teaching prescription communication skills to MBBS students. Students have shown more favourable perception towards Role play than SGD for teaching prescription communication skills.

Keywords: Drug prescription, Role playing, Focus groups

Introduction

Prescription communication skills of the medical graduates forms an important element of patient care as it has a direct influence on treatment outcome. A medical graduate is expected to be competent in communicating his/her prescription to the patient and the care-takers give appropriate instructions and warnings regarding the use of the prescribed medicines. Communication skill is considered as a core competency that must be acquired by medical graduates as per the 1997 Graduate Medical Education (GME) regulations laid down by the Medical Council of India (MCI) (1). Yet, most medical schools and institutes have not made adequate efforts to teach or assess them.

In the MBBS curriculum, prescribing is taught under pharmacology during the second year of the course. Conventionally, pharmacology has focused on teaching undergraduates the theoretical aspects of medical prescription, with little emphasis on the communication domain. Students learn to write prescriptions for a medical illness but they do not receive any training on proper ways to counsel or educate patients about the proper use of the prescribed medicines (2). Inadequate communication skills of the medical graduate about drug therapy leads to patient's non-adherence to therapy, errors in medication, poor therapeutic outcome and, therefore, increased burden on healthcare system (3). A survey among outpatient clinic attendants revealed inadequate prescription communication with the patients. Though a good number of patients were adequately aware of the effects and different methods of administration of their drugs, a considerable number of them had poor knowledge of the adverse drug reactions and warnings; they were also unaware of the information that they were supposed to provide their physician with during their follow-up visits (3). Some of the factors which accounted for the poor communication of prescriptions were the use of medical jargon, and the inability to speak in a simple language, listen attentively to the patient's concerns and facilitate the patient's responses (4). Hence, this gap should be addressed through effective methods for teaching prescription communication skills. Interactive and innovative teaching methods are essential for promoting and training communication skills, as compared to traditional didactic methods. Several approaches which include experiential teaching methods like Role plays, patient tracking, simulations, and Small Group Discussions (SGD) have been introduced for imparting communication skills (5). Such approaches help to reinforce the strengths and identify the weaknesses in the component skills of communication.

In Role Play, the students are assigned different roles as per a case or scenario and they are expected to act out their roles to get a meaningful experience of a particular scenario. It gives them a first-hand experience of human interaction with better understanding of appropriate behavioural approaches to possible similar real life scenarios. It stresses on the learner's need to know, self-direction and varied experiences and contributes to following a problem-centred approach (6). Luttenberger et al. in their study pointed out the effectiveness of role play in imparting communication skills among second- year medical undergraduates (7). Lavanya et al. in their study found that most students considered role play as a preferred tool to acquire proper communication skills on drug therapy (8). SGD allows face-to-face interaction between members of a small group, encourages students to develop the capacity to listen, question, and persuade and respect the opinion of others (9). Deveugele et al. employed various methods like small group discussions, role plays, and video tapes to teach communication skills and observed a positive effect in the students' communication skills (10). In another study, Annamalai et al. concluded that small group discussion improved communication skills (11). After extensive literature search, however, no single study could be found that compared the effectiveness of Role play and SGD with one another in teaching prescription communication skills.

Though studies have separately supported Role plays and SGD as effective teaching methods for communication skills training, there are few studies that have compared the effectiveness of Role play with SGD in teaching prescription communication skills (12, 13). Hence, this study was carried out to compare the effectiveness of these two methods in teaching prescription communication skills to medical students. To study the difference in the effectiveness of Role play and SGD in teaching prescription communication skills to students of Phase Two of the MBBS course.

Methods

Study design, setting and duration

This was a prospective interventional study done in the Department of Pharmacology affiliated to the Department of Surgery at a Tertiary Care Centre in North Kerala for a period of three months from March 2021 to May 2021.

Study sample

Sixty students who were studying at students

of Phase Two of the MBBS course were recruited by convenience sampling. These students followed a division into A and B batches by simple randomisation, with 30 students in each batch, for regular Pharmacology practical sessions. After informing the sample population about the study, informed consent was obtained from each willing student.

Inclusion criteria – Students who were in the Phase Two of the MBBS Course and scheduled for pharmacology practical sessions between March and May 2021.

Exclusion criteria – Students who were in the Phase Two of the MBBS Course and scheduled for pharmacology practical sessions between March and May 2021 and not willing to participate in the study.

Intervention

Prescription communication skills were taught by role play to the A batch and by SGD to the B batch. Each group attended six independent sessions on prescription communication skills on six different topics, through the respective methods.

Role play group: The students in this group were divided into 5 subgroups. All the subgroups were given 45 minutes to practice role plays on the given topic where the students took up the roles of doctor and patient in turn. Each subgroup was provided with a guiding pamphlet which included all necessary medical details with description of the case for doctor and patient roles, respectively. Permission was given to include the emotional aspects into the sessions, if required. After the practice session, each subgroup was given 15 minutes to prepare the final role play which was to be presented before the whole group. The next one hour included Role play demonstrations by the subgroups. The facilitator provided constructive feedback, addressing the communication related issues after each role play. The total duration of this session was two hours.

SGD group: The students in this group were divided into 5 subgroups. A structured information pamphlet containing literature about communication etiquettes, disease condition,

and drug therapy was given to the groups. Each subgroup discussed how they will communicate the prescription for the given condition following the structured information in the pamphlet for the first 45 minutes. For the next 15 minutes, each subgroup was asked to prepare a summary of the members' discussion to be presented by the randomly selected sub-group leader before the whole group. The next one hour included presentations by the subgroups. The facilitator moderated the presentations and provided inputs after each presentation. The total duration of this session was two hours.

Data collection

One week after the respective sessions, an Objective Structured Clinical Examination (OSCE) was conducted for the students in both groups with the same case scenario that was taught during the session. During the OSCE, the students communicated prescriptions to a simulated patient (trained resident). A faculty other than the investigator conducted the OSCE using a peer reviewed OSCE scorecard to avoid investigator bias. The same process was followed for all the 6 sessions. The timeline of the conduct of sessions and OSCE is shown in Table 1.

At the completion of all 6 sessions, students in both groups were asked to respond to a peer reviewed feedback questionnaire to report their perceptions about the respective methods. The content validity of the questionnaire was checked by subject experts. The questionnaire contained nine close-ended questions to assess the student's perception related to the usefulness of the session in imparting communication skills (questions 1 to 5), satisfaction with the session (questions 6 and 7) and acceptability of the session (questions 8 and 9), as shown in Figure 1. The responses were scored based on a 5-point Likert scale ranging from 1 (strongly disagree) to 5 (strongly agree). The questionnaire also contained one open ended question on suggestions for improvement of the respective sessions. After the data collection was completed, both t groups were exposed to the alternative teaching methodology to avoid ethical concerns.

Table 1: Timeline showing the teaching session and OSCE

Session number	Time of conduct of session	Case scenarios	Teaching method		Time of conduct of OSCE
			A Batch (n=30)	B Batch (n=30)	
Session 1	Week 1	A child with Bronchial asthma.	Role play	SGD	Week 2
Session 2	Week 3	A case of Peptic ulcer positive for H. Pylori.	Role play	SGD	Week 4
Session 3	Week 5	Newly diagnosed case of Angina.	Role play	SGD	Week 6
Session 4	Week 7	A pregnant woman with Hypertension.	Role play	SGD	Week 8
Session 5	Week 9	A case of Type 2 diabetes requiring insulin therapy.	Role play	SGD	Week 10
Session 6	Week 11	Category 1 tuberculosis.	Role play	SGD	Week 12

Q1: Session was useful in learning how to communicate drug therapy in a simple language.

Q2: Session was useful in learning how to relate to patient's concerns about drug therapy.

Q3: Session was useful in increasing my confidence in communicating to patient about drug therapy.

Q4: Session was useful in making me aware of my strengths in communication.

Q5: Session was useful in making me aware of my weakness in communication.

Q6: I am satisfied with the way the session was conducted.

Q7: I am satisfied with the time allotted for the session.

Q8: The session is a welcome change in the curriculum.

Q9: I recommend more such sessions in the future.

Figure 1: The list of questions included in the Perception Questionnaire

Statistical analysis

The data were entered into Microsoft Excel and analysed using online statistical calculators (14-17). Quantitative data were expressed as mean±standard deviation and compared using independent t test. Ordinal data generated from the perception questionnaire were expressed as percentages. The level of statistical significance was set at a p value less than 0.05. The methodology of the study is represented in Figure 2.

Ethical Consideration

The study was conducted after receiving ethical clearance from the Institutional Review Board of the Tertiary Care Centre (Ref No. KMCT/RP2021/IEC/31 dated 23/02/2021).

Results

All the 60 Phase two MBBS students enrolled in the study completed the questionnaire.

Comparison of effectiveness of Role play and SGD: Session-wise analysis showed that the mean OSCE scores of the role play group were significantly higher than that of the SGD group for all the sessions (Table 2). Mean total OSCE score of the role play group was significantly higher than that of the SGD group (Table 3).

Comparison of the perception of students about the teaching methods: Cronbach's Alpha for reliability of the Questionnaire was found to be 0.93 in the present study. The Feedback Questionnaire analysis showed that Role play received better responses than SGD for questions relating to the usefulness of the session in imparting communication skills like communicating in a simple language, relating to the patients' concerns, increasing confidence in
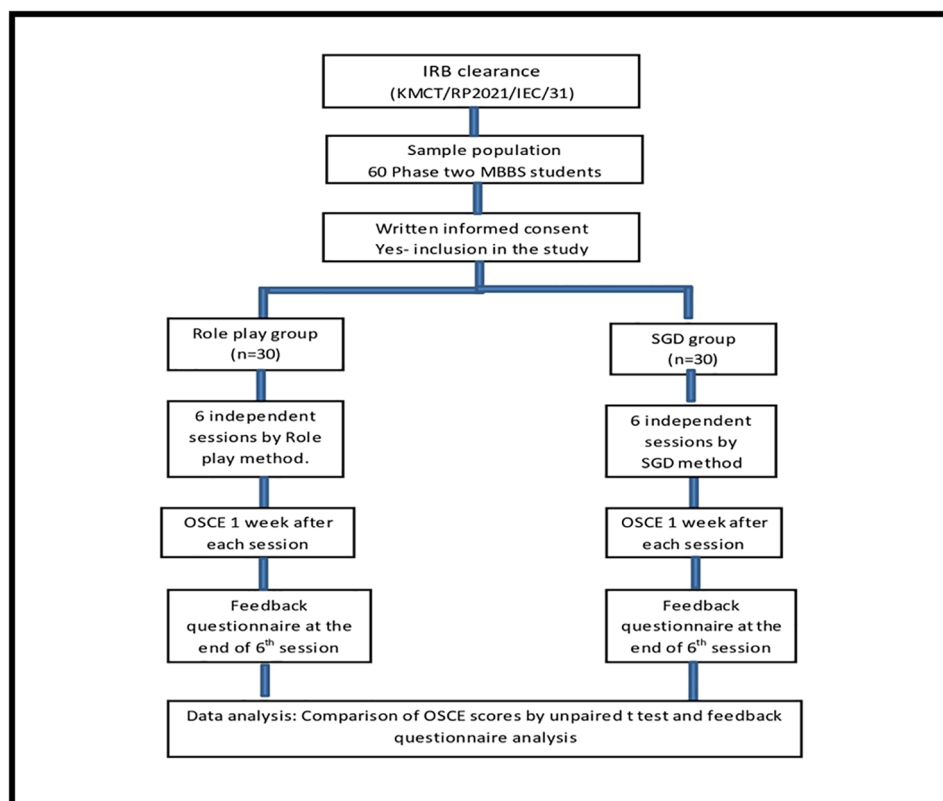

Figure 2: The Method of the Study

Table 2: Comparison of session-wise OSCE scores of the study groups

Session	Study group	OSCE score Mean±SD	P (Independent t-test)
1	Role play (n=30)	9.78±1.21	<0.001
	SGD (n=30)	7.38±1.76	
2	Role play (n=30)	10.08±1.31	0.010
	SGD (n=30)	9.00±2.08	
3	Role play (n=30)	10.02±1.05	<0.001
	SGD (n=30)	6.15±1.45	
4	Role play (n=30)	10.23±1.12	<0.001
	SGD (n=30)	8.37±2.63	
5	Role play (n=30)	10.17±1.07	<0.001
	SGD (n=30)	7.51±2.11	
6	Role play (n=30)	10.12±1.72	<0.001
	SGD (n=30)	8.30±1.46	

Table 3: Comparison of total OSCE scores of the study groups

Study group	OSCE score Mean±SD	P (Independent t-test)
Role play (n=30)	60.39±6.33	**<0.001**
SGD (n=30)	47.79±4.27	

communicating with the patient, and making the participants aware of strengths in communication and weaknesses in communication skills. The perceptions of students regarding the way the session was conducted and the time allotted for the session were similar. Role play also received better responses to the acceptability of the session as a welcome change in the curriculum and for it to be recommended in the future. The analysis

is shown in Figure 3. The different suggestions for improvement provided by the students for the respective teaching sessions is shown in Table 4.

Discussion

One of the most important aspects of every patient-doctor interview is communication regarding prescription medications. A doctor's expertise lies in his ability to show empathy,
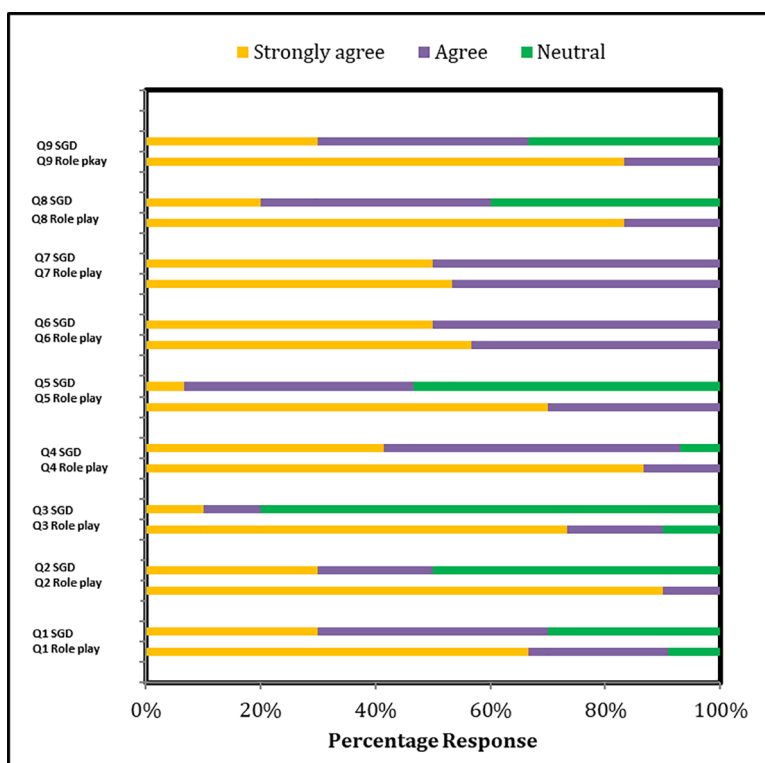

Figure 3: Comparison of the students' perceptions about SGD and Role Play

Table 4: Suggestions for improvement of the sessions

Role play	SGD
Ensure participation of all students including the introvert ones (7).	Ensure that all students in the group contribute to the discussion (9).
Improve setting for role play (6).	Prior intimation of topic (4).
Provide time for preparing for roles (4).	More sources of information (4).
Increase the number of role play sessions to prepare us for real things (2).	All students should be asked to write down the summary of discussion (3).
Personal feedback from faculty will be useful (1).	No suggestions (10).
Use Videotaping of role plays for playback (1).	
No suggestions (9).	

explain the disease and the various treatment options available, counsel the patients, make the patient aware of the risks and complications as regards to his/her illness and its treatment, the need for follow up, and resolve the patients' concerns in a language which the patient can understand (18, 19). The WHO recommends effective communication skills as an important aspect of good prescribing. It is, hence, recommended that prescription communication skills should be taught for the medical undergraduates. The purpose of the present study was to identify the better option between role play and SGD for teaching prescription communication skills to medical students.

In this comparative study done on 60 MBBS students, role play was more effective than SGD in teaching prescription communication skills. The role play group achieved significantly higher scores than the SGD group in each post-session OSCE. The mean total OSCE score of the role play group was 12.60 points higher than that of the SGD group (P<0.001). These findings are similar to those reported by Bachmann C and colleagues, where a two-hour communication skills workshop based on role play was organized for medical students. The intervention group showed better results than the control group in a communication skills exam. The control group comprised of students who had not attended the workshop (20).

In another study done by Nuzzo et al. on 173 fourth year medical students, significantly higher OSCE scores were obtained by students who had attended role play training in communication skills twelve months before the OSCE than the untrained students. This study supported the implementation of role play for teaching communication skills to undergraduate students and also suggested a lasting benefit of such sessions (21). One aspect which may explain the significantly higher scores of the role play group may be that it allows the students to experience the view-points of both doctor and patient. Experiencing these different aspects and

the ambiguity of the partners helps to enhance a student's understanding of the different dimensions of the doctor-patient interaction.

In our study, role play received significantly better responses than SGD in seven out of nine questions in the perception questionnaire. From the students' perspective, role play was considered more useful as a tool for learning skills of communication. Comparable findings were noted by Tayem et al. in their study on peer role play where students reported that they felt more confident in communicating all elements of drug therapy to the patients and had a better understanding of how to communicate the information in a prescription in a simple language that the patient could understand (22). Similar findings on the students' perception regarding usefulness of the role play sessions in learning communication skills has been corroborated by Preeti Garg et al. (23) The response ratings regarding the student's satisfaction with the sessions and the time allotted for the sessions were comparable in both the groups. Role play also received greater response ratings for acceptability of the session as a welcome change in the curriculum and its recommendation for the future sessions as well. Similar finding was found by Bosse et al. in their study (24).

Despite the effectiveness of Role play, it had its own challenges. One of the challenges faced in this study was the initial unwillingness of a few students towards acting of the assigned roles. Proper encouragement of all students is essential, so that each student plays at least one role in the sessions. We also observed that structured scripts for the roles provided the students with better clarity on the areas of communication. Improving the role play settings, videotaping of role plays for playback and personal feedback by the faculty were some of the suggestions which may be incorporated to make role play demonstrations more effective.

Limitations of the study
The participants in the study were of a single

semester of a single institution.

The total number of participants in this study was fairly small (n=60).

The participants were not blinded to the intervention and so, might have permitted leakage of information between participants.

Inclusion of a few openended questions in the perception questionnaire would have explored the students' perceptions in depth and so, might have permitted leakage of information between participants.

The study was conducted in a controlled and supportive classroom setting, which evokes a sense of comfort within the learners. It would be interesting to see how much of this experience translates to clinical efficiency in the real-life scenario.

Conclusion

In conclusion, Role play is more effective than SGD in teaching prescription communication skills to MBBS students. Students have shown more favourable perceptions towards Role play than SGD as a method for teaching prescription communication skills.

Recommendation

This study offers a realistic basis for the use of roleplay in undergraduate pharmacology students for acquisition of prescription communication skills. By virtue of providing experiential learning opportunities and its feasibility of implementation, Role-play sessions justify inclusion in undergraduate medical curricula.

Author Contribution

D.G.K, A.V.K, Sh.A, M.P.G. contributed to the conception and design of the work; the acquisition, analysis, or interpretation of data for the work. All Authors contributed in drafting and revising the manuscript critically for important intellectual content. All authors have read and approved the final manuscript and agree to be accountable for all aspects of the work in ensuring that questions related to the accuracy or integrity of any part of the work are appropriately investigated and resolved.

Conflict of Interest: None declared.

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