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Evaluation Rubric as an Assessment Tool for Communication Skills in small Group Discussions – A Comparative Study.

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ABSTRACT

Good communication skill is an important yet ignored aspect in clinical medicine. Awareness that this attribute would be assessed encourages the students to consciously incorporate techniques of good communication in their day to day activities. Hence assessment of communication skills should become a strategic tool for enhancing communication skills in higher education systems. The aim of this study was to determine the effectiveness of rubrics for evaluating communication skills in students participating in small group discussions.

This comparison study consisted of 100 phase one MBBS students. Students were allotted into eight groups of 12 -13 students and was given a problem based question to discuss on. Assessors were allotted to groups to grade students based on their communication skills. Traditional method of assessment did not have any predefined criteria while the rubric method was based on criteria and scoring was done based on the level of performance in each criteria. The scores obtained were compared using paired t test and significant difference was found between the two methods of evaluation. It was also observed that the scores of students improved when they were made aware of the evaluation criteria. Evaluation with rubric method promotes consistency in scoring, encourages self-assessment, self-improvement and motivates learners to achieve the next level. Rubrics are beneficial to learners, facilitate communication between faculty and learners and enable faculty to communicate specific goals, expectations and performance requirements. The rubric method was considered better than the traditional method of evaluation by both the faculty and the students.

KEYWORDS: Communication skills; Evaluation rubric; Small group discussion

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INTRODUCTION

Communication is the heart and art of medicine and effective doctor patient communication is the central component in the delivery of health care. Effective communication between doctor and patient paves the way for sharing pertinent information for accurate diagnosis of the clinical condition, understanding patient's emotional needs, and ensuring patient's involvement in their treatment process.¹ Medical trainees imbibe communication skills subconsciously from their seniors and teachers by observing them but these are not adequate enough to exhibit good communication skills in future. In spite of the awareness of importance of communication skills in medical practice it has been observed that there is a decline in communication skills among doctors which could be attributed to doctor's work burden, fear of litigation and unrealistic patient expectations resulting in loss of focus on holistic patient care². Further, cognitive and psychomotor skills are given utmost importance in medical curriculum and communication skills are not even considered as part of curriculum.

To develop excellent communication skills doctors need to be trained. Researchers have proved that training in communication skills have found to be efficient in improving doctor patient relationships.³ Hence communication skills training needs to be incorporated in medical curriculum , but unless these skills are assessed students would not consider it as an important part of their training.^{4,5} various methods of assessment has been designed to test cognitive and psychomotor skills in medical students while communication skills and various attributes of professionalism are rarely assessed. "Assessment drives learning" teaching communication skills without assessing it would just end up as a loss of time and effort with no desirable change noted in the outcome. Assessment of communication skills would provide a concrete feedback to the medical students and further help them to improve their skills.⁶

Traditional methods of assessment has no structured guidelines for assessing communication skills and the factors taken into account for communication skills assessment is not known to the students and this results in evaluator errors.⁷ A rubric is a working guide for students and teachers and has two major aspects: a set of evaluation criteria and descriptions of levels of performance for these criteria. While using Rubric for evaluation the performance of the student is matched with the description given and scored accordingly. This matching process can avert the rush to judgement that normally occurs in classroom assessment methods. Here instead of judging, the performance rubric

helps to describe the performance. This description process can be used for feedback and teaching. Judgements without descriptions stops the growth of an individual. This assessment tool can be handed out before the assessment begins so that both the faculty and students are aware of the evaluation criteria and the level of performance expected.^{8,9}

Though numerous studies have focused on the effectiveness of rubric for evaluating projects and assignments submitted by students, the effectiveness of use of rubric for evaluating communication skills in students during small group discussions were not addressed. The overarching purpose of this project was to know the effectiveness of evaluation rubric as an assessment tool in comparison to traditional method for evaluation of communication skills in medical students.

MATERIALS AND METHODS

Approval for the conduct of this study was obtained from the Institutional Ethics committee of jubilee mission medical college and research institute. The study was conducted during the time period from October 2019 to March 2020. The phase one MBBS student were invited to participate in the study.

Research model: Small group discussions is a weekly two hour session of problem based learning in the department of physiology. 100 students who had given Written consent to participate in the study were grouped into two batches of 50 each. Batch of 50 students were further divided into four batches of 12-13 students. Each batch was given a problem based question based on topics which closely parallels the lectures presented in the didactic portion of the course. Students were encouraged to discuss and find answers for the problem based question. During the two month period, when data collection was done, eight small group sessions were organised. Each student was assessed eight times during the period of two months using both the traditional and rubric method.

Assessment was done in two phases, in the first phase during the small group discussion two assessors are allotted for a group of 50 students. one assessor assesses using rubric method and the other using traditional method. The assessors do not discuss the criteria with each other. During the second phase, before the next session of group discussions the evaluation rubric was distributed to the students and they were briefed about the evaluation criteria and the grading methods. Two new assessors were

allotted for the batches. Assessment was again done by the traditional and rubric method. The assessor assessing by traditional method was unaware of the evaluation criteria. Perception of the student & faculty regarding the evaluation rubric was collected using Google forms at the end of the study

Data collection tools: Traditional method of evaluation did not have any specific guidelines and the evaluator was asked to assess communication skills of the students participating in the group discussion and grade them with a maximum score of 20.

Evaluation rubric is a scoring guide with a set of criteria for grading. The evaluation criteria used in the present rubric was teamwork, time management, communication and interpersonal skills. For each criteria a description of performance was given and the students were graded as excellent, good, satisfactory, needs improvement. A numeric composite score was calculated for each criteria using the following conversion for each performance, needs improvement = 2, satisfactory 3, good=4, excellent = 5. The possible scores ranged from 8 to 20 points. The rubric is presented in table format and can be used by teachers when marking and by students when they plan their work.

Data analysis: Scores obtained using the rubric method and traditional methods of evaluation were tabulated and mean scores calculated. Analysis was done using SPSS. Comparison of the scores obtained by both the methods was done using the unpaired t test. Comparison was also done between the scores obtained before and after intervention (making students aware of the rubric) in both methods using paired t test. Questionnaire data (feedback) was expressed in frequencies in diverging stacked bar charts.

RESULT

Of the 100 students enrolled in the study 61% were females. The mean scores obtained when communication skill was assessed using the traditional method was 13.23 and using the rubric method was 11.08. A statistical significant difference was noted in the scores obtained by these two methods. The scores of the students were 14.97 and 13.02 after the intervention. There was no statistically significant difference between the scores attained after intervention in the traditional method while the rubric method showed statistically significant difference.

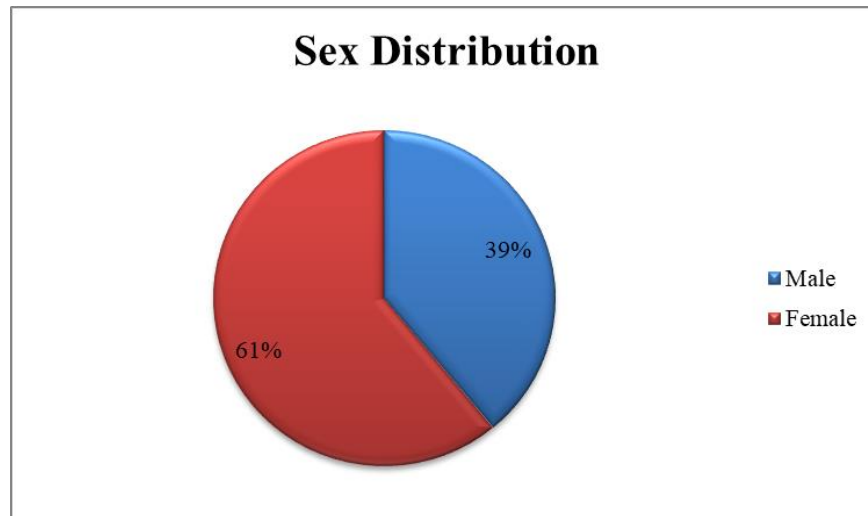


Figure:1 Gender wise distribution of study population

Table : 1 comparison of traditional and rubric method of evaluation before and after intervention

	N	T	R	p Value
		Mean±SD	Mean±SD	
Before Intervention	100	13.23±1.22	11.06±1.19	<0.001**
After	100	13.02±1.16	14.97±2.00	<0.001**

**p value <0.01 – highly significant

Table :2 comparison of before intervention and after intervention scores using traditional and rubric method

	N	T	R
		Mean±SD	Mean±SD
Before Intervention	100	13.23±1.22	11.06±1.19
After	100	13.02±1.16	14.97±2.00
p Value		0.058	<0.001**

**P value <0.01 highly significant

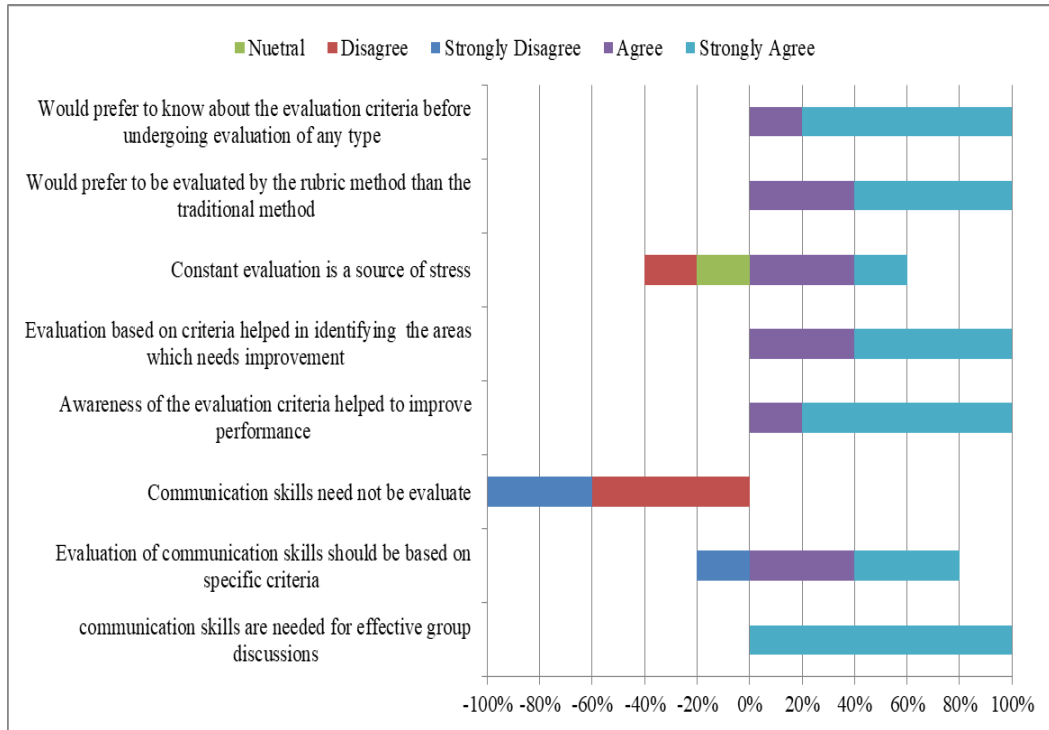


Figure: 1 faculty perception regarding rubric evaluation

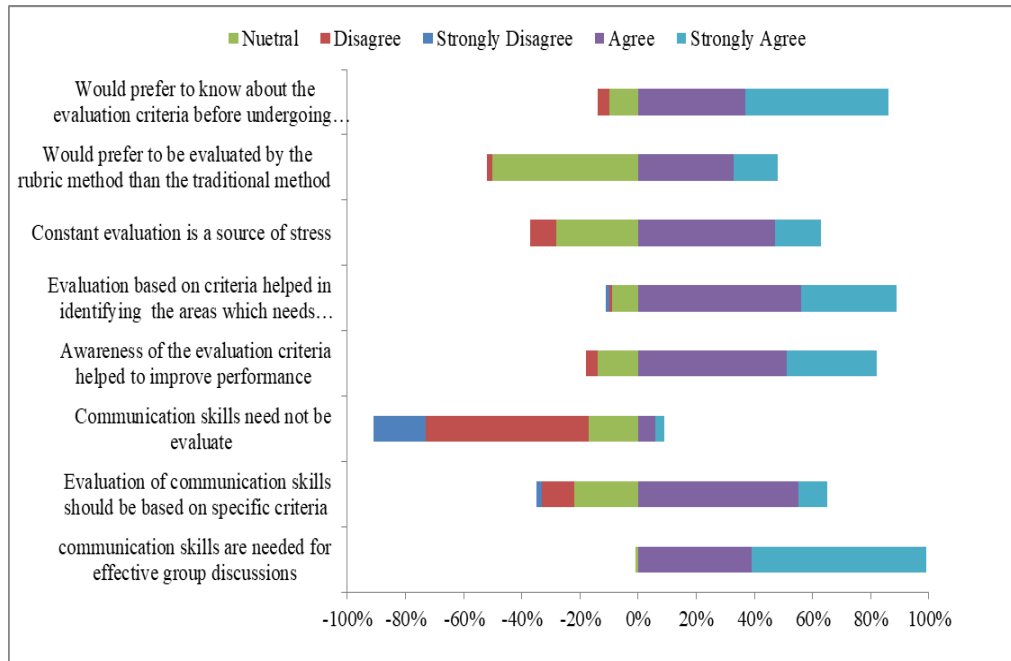


Figure:2 students perception regarding rubric evaluation

DISCUSSION

In this study the effectiveness of the two methods, traditional and rubric method, in assessing communication skills were assessed. It was found that in spite of both methods assessing the communication skills in the same individual there was a statistically significant difference in the scores obtained (table:1). This could be due to the fact that rubric based assessment was done based on criteria while traditional method had no specific guidelines resulting in judgement errors. Rubric based method evaluates professionalism, interactions in groups, timekeeping, and approach to group participation hence providing a more global assessment of performance. This assessment method is valuable as it gives a feedback for the students regarding their skills in communication which they might not receive otherwise.

The study also points to the fact that the rubric can serve as a guide for students to appreciate the desired performance outcomes. Awareness about the evaluation criteria can influence the performance of students as is represented in Table 2. The students were assessed by both methods and it was found that there was a significant improvement in their scores when assessed by rubric method while the traditional assessment methods did not show much difference. The rubric method of evaluation can be used as a self-assessment method and peer assessment method too. Research has proven that self-assessment exercises are beneficial in health care professions but lack of proper guidelines or assessment methods for communication skills could not tap into the potentials of self-assessment methods^{10,11}. The usage of rubric method of evaluation would help to serve as a constructive feedback process for students. Evaluation with rubric method promotes consistency in scoring, encourages self-assessment and self-improvement and motivates learners to achieve the next level. Rubrics are beneficial to learners, facilitate communication between faculty and learners and enable faculty to communicate specific goals, expectations and performance requirements.^{12,13}

The faculty and students agree about the importance of assessing communication skills but both groups also agree to the fact that regular assessment is always a source of stress. All the faculty members have opined that they prefer to do assessment using rubrics but the student group seems confused about this approach as there were around 52% of neutral responses. This response looks confusing as all the students have agreed that criteria should be present for evaluation and awareness of

the assessment criteria helps them to perform better. So the cause of neutral response in deciding the pattern of evaluation they would prefer needs to be probed into.

CONCLUSION

100 phase one MBBS student's communication skills in small group discussion were assessed using traditional and rubric method. It was observed that there was a statistically significant difference between the scores obtained by both methods. Making the students aware of the evaluation criteria resulted in better performance of students when evaluated by rubric method while no change was noted in evaluation by the traditional methods. This further emphasises the fact that while evaluating communication skills, rubric method has higher effectiveness in comparison to traditional method. Both the faculty and the students also had expressed their opinions in favour of rubric method of evaluation.

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Conflict of interest: The authors have no conflict of interest to declare.

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