

A novel strategy for teaching hematology to second year MBBS students by training interns as standardized patients

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Abstract

Research has significantly contributed to medical education with techniques like Problem Based Learning, Standardized Patients (SP's) and Objectively Structured Clinical Examination. Howard S Barrows used SP's initially and coined the term. Later it was developed by medical teachers like Paul Stillman. Even though SP's were introduced a little later in Germany, Frohmel observed from various studies that SP's are very useful in teaching and assessment. He also stated that quality assurance is required in SP training. Nagoshi implied that SP's create a 'teachable moment' rather than to wait for. Now SP's are regularly used in countries like USA, UK, Canada and Australia. May has described a consortium formed by eight medical schools, which have a training program for SP's and follow the same protocol for consistency. Peter Weyrich has used senior students as tutors and found it was well accepted by the juniors and beneficial to the seniors also. In this study we have recruited 15 intern volunteers to act as SP's to teach Hematology for second MBBS students. 34 student volunteers participated in this study. The students were divided in to groups, studied the SP's and cases were discussed with facilitators. At the end of this session, feedback was taken, analyzed and the results tabulated. The most positive feedback was the level of contribution of the SP's and interaction with SP's as well as peers. The students also requested for more SP sessions. The feedback indicated that more careful SP training should be imparted and also the number of students in a group should be smaller for more effective learning.

Keywords: Hematology teaching, Standardized Patients, Standardized Patient training, Students as tutors, Quality assurance.

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INTRODUCTION

Medical education has evolved significantly over the years. It is an area where innovations and improvisations have a large role to play. Professor Norman of McMaster

University, Canada, has reflected his observations about the progress of research in medical education for the past three decades¹. He implied that research has contributed substantially in understanding the learning process and educators are aware of the importance of evidence in educational decision making. He indicated that the major developments are basic research, problem based learning, continuing education and assessment methods like simulated patients. He preferred the term 'Standardized Patients'(SP's) to simulated patients. The concept of SP's was originally initiated by Howard S Barrows, a neurologist to train medical students². Later Paula Stillman established the efficacy of SP's by studying 336 internal medicine residents in 14 residency programs with 1289 SP's³. She observed that SP's significantly increased the performance of the residents and was well

received by them. Frohmel has studied the implementation of SP's in Germany^{4,5}. He collected data from 30 medical schools, analyzed and concluded that SP's are used mainly to teach communication skills and assessment. He stressed that quality assurance is needed in training SP's. Nagoshi observed that SP's allow the facilitator to create a 'teachable moment' rather than to wait for. He also opined that SP's enhances student learning on patients who are available and willing⁶. Anthony Ryan, in a study assessed communication and consultation skills (CCS) of both medical and nursing students using SP's⁷. He used SP's as Standardized Patient Educators (SPE), since he took formative feedback from them. His study revealed that a minor portion of the students still require further training in CCS. James T Hardee realized that flexibility and improvisation on the part of SP's in teaching Clinician - Patient Communication makes them as coaches and collaborators⁸. He preferred to call them as 'care actors'. Chalabian has expressed the growing concern for the declining clinical skills of physicians⁹. He has emphasized the role of SP's in teaching and assessing a physician's competence in clinical skills. Perera has used self-assessment and peer review in training the SP's instead of SP trainers¹⁰. He has observed that the post-training performance of the SP's had significantly improved and the training method was well accepted by the SP's. He also suggested that more studies are needed to further refine the SP training methods. Furman of National Board of Medical Examiners, Philadelphia, USA has discussed the quality assurance methods for training SP-trainers, protocols to trains SP's to ensure SP performances are consistent and standardized¹¹. May has described the consortium formed by eight medical schools in California, which has formed a common clinical assessment tool for final year medical students across the state¹². All the medical schools share the same SP cases and check lists. He has also reviewed the papers published about SP's in the last ten years¹³. He has observed that most papers conclude that the use of SP's is valuable but he also cautions that more rigorous studies are required. Peter Weyrich¹⁴ has used senior students as tutors to teach clinical skills to junior students. The tutees had shown very high acceptance for this method and expressed increased confidence levels in learning. The tutors have also expressed high satisfaction levels for this teaching activity. In this study, we made an attempt to assess the impact of training and using interns as SP's to teach Hematology to second MBBS students.

MATERIALS AND METHODS

15 Interns volunteered to be trained and act as SP's. Specific diseases in Hematology were assigned to them.

The diseases were 1.Iron Deficiency Anemia, 2.Megaloblastic Anemia, 3.Aplastic Anemia, 4.Hereditary Spherocytosis, 5.Thalassemia, 6.Sickle cell Anemia, 7.Systemic Lupus Erythematoses, 8.Hodgkin Lymphoma, 9.Multiple Myeloma, 10.Acute Myeloid Leukemia, 11.Chronic Myeloid Leukemia. For some diseases like Iron Deficiency Anemia, multiple SP's were allotted. The volunteers were asked to prepare the given topics in such a way that they should be able to act like one. This SP training was supervised by the Internal Medicine department faculty and appropriate clues and suggestions were given. Since the volunteers are already interns, they had basic knowledge and it was not difficult to train them. Also the interns showed lot of creativity and improvisation in the acting process. They created records like Complete Blood Count, Biochemistry, Radiology etc. to suit their allotted topics. Some of them even dressed and put make up accordingly. A batch of 34 student volunteers who gave consent to participate in this study were divided into four groups. The SP's were allotted to different groups and rotated in such a way that all the four groups would have met all the SP's. After this, the facilitators from the Pathology department discussed the cases. After the session was over, feedback was taken using 5 point Likert scale and with few open-ended questions, to assess the impact of the technique among the students. The feedback was analyzed and the results were tabulated.

OBSERVATIONS AND RESULTS

The Likert scale was prepared to assess the usefulness of the session. To know the students perspectives and suggestions 4 open ended questions were asked. The results are given below. Tagore Medical College and Hospital – Pathology department Students response about teaching Hematology using interns as Standardised Patients.

Table 1: Feedback Result Summary

	1- Poor	2- Average	3- Adequate	4- Very good	5- Excellent
Content/Relevance		4	21	9	
Teaching		3	18	12	1
Interaction		2	16	9	7
SPs Contribution	1	4	11	14	4
Overall	1	5	14	11	3

1. How do you rate this session: Tick in the appropriate boxes
2. Do you feel confident on the subject after this session? Yes-28/ No-1/ Unsure-5
3. What were the positive aspects about this session?

- a. Interaction with the Interns and fellow students was useful 15
- b. Problem based learning method was helpful 8
- c. Able to understand the key points well in this method 7
- d. Standardised patient technique is a useful tool 6
- e. Interns contribution was useful 6
- f. Sessions were relaxing and we felt more confident 6
- g. Group discussion was useful 4
- 4. What could be improved about this session in the future?
 - a. Want more similar sessions / on every week preferably on Saturdays 8
 - b. Make other teaching sessions more interactive 7
 - c. Want more Problem based teaching sessions 2
- 5. Any additional comment?
 - 1. Audio arrangement could have been better 2

open ended part of the feedback, 82% of the students felt confident about the subject after this session. The most positive aspect of the session according to the students is interaction with the SP's and peers (44%). Other positive aspects according to the students were the usefulness of the Problem Based Learning aspect, increase in confidence level when dealing with SP's and usefulness of the group discussion. Many of them suggested that more sessions of SP's may be conducted in weekends (50%). One negative aspect was, the discussion was not clearly audible to some students (5%). Our study was comparable to that of Peter Weyrich¹⁴ *et al.* from University of Tuebingen, Germany in 2008. Their study showed that 82% of the students considered teaching by senior students was sufficient compared to 1% of the students who wanted faculty only. They also showed that the senior students gained personal knowledge and professional satisfaction by this activity. Even though we did not document, the interns showed remarkable interest in preparing for the role. They interacted with the students very well and that clearly showed in the student's feedback.

Table 2: Likert Scale Analysis of Results

Aspect of the session	Rating	Number and percentage of students responded
Content and Relevance of the Session	Excellent	(0) 0%
Teaching aspect of the Session	Very good	(9) 26%
Interaction aspect of the Session	Adequate	(21) 61%
SP's contribution of the session	Excellent	(1) 3%
Overall opinion about the session	Very good	(12) 35%
	Adequate	(18) 52%
	Excellent	(7) 20%
	Very good	(9) 26%
	Adequate	(16) 47%
	Excellent	(4) 12%
	Very good	(14) 41%
	Adequate	(11) 32%
	Excellent	(3) 8%
	Very good	(11) 32%
	Adequate	(14) 41%

DISCUSSION

The student's ratings about the session were very positive. 9 students (26%) felt the content and its relevance of teaching was Very good. 13 students (38%) felt the teaching was Very good/ Excellent. 16 students (46%) felt the interaction was Very good/ Excellent. 18 students felt (53%) SP's contribution was Very good/ Excellent. 14 students (40%) felt overall the session was Very good/Excellent. The most positive aspects of the session were SP's contribution (53%) and Interaction with SPs and peers (46%). The lowest scoring in the feedback was the content and its relevance. Regarding the

CONCLUSION

From this study we were able to safely conclude that the SP method of learning is quite efficient not only in assessment but also in teaching. It is well accepted by the students. It also gives them confidence and students like the interaction. Giving this role to interns does a dual function of facilitating the student learning and also benefitting the seniors. The key aspects to watch out are the quality of training imparted to the SPs and the number of students in a team interacting with the SPs. Further studies are required to develop the efficiency of this model for this is likely to benefit countries like India where professional SPs are not common.

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