

Is it better to use teachers or patient support group volunteers as surrogate patients to train students in clinical problem solving?

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Background

As an essential clinical skill, medical students need to learn to take and interpret a history from a patient. In order to do this, students need to develop a systematic approach to asking questions, be able to identify and extract the relevant information, then problem-solve to form a likely diagnosis and management plan. Students also need to be able to summarize and synthesize the information for the purposes of communication with colleagues or medical record keeping. Learning these skills requires repeated practice ideally with feedback on performance. Use of role play and simulated patients are two active learning strategies used by medical educators to teach students such skills.

Methods

This was a mixed method study using a two-armed quasi-experimental study design to evaluate the effectiveness of the workshop, and qualitative methods to examine the student's perceived learning benefits of using simulated patients.

In the 2012-13 academic year, all Year 3 medical students at the University of Hong Kong who participated in the Problem Solving Workshop during the Family Medicine rotation were invited to take part in the study.

Half of the students were allocated to the intervention group where simulated patients role playing their own clinical cases, and the other half were in control group where the workshop facilitators role playing the identical cases.

Our simulated patients were members of various patient support groups who have volunteered to participate in teaching and recruited via simulated patients recruitment programme in 2012. These volunteers were individuals with illness experiences and previous interactions with doctors and nurses as real patients.

Participants in all workshops underwent pre-post assessments on completing a medical record form on a video-taped consultation, and were evaluated in an end-of-rotation Objective Structured Clinical Examination (OSCE).

Students provided feedback based on the learning experience and approach by completing a workshop evaluation form.

Students participating in the intervention group were asked to provide feedback on their opinions regarding the value of using SPs for the role play during debriefing session.

Results

The quantitative results revealed statistically significant increase in the total score of Medical Record Form in both groups after the Problem Solving Workshop.

Descriptive statistics of pre-test and post-test scores

	Overall (N=158)			Intervention group (N=81)			Control group (N=77)		
	Mean	SD	p-value	Mean	SD	p-value	Mean	SD	p-value
Pre-test MRF score	5.23	1.55	<0.001	5.23	1.65	<0.001	5.24	1.45	<0.001
Post-test MRF score	7.93	1.51		8.04	1.43		7.81	1.59	

Paired samples t-test was performed to test whether there was a difference of pre-test and post-test score on Medical Record Form before and after the workshop.

Although both settings were proved to be effective, students valued the real patient interaction and the constructive feedback from patients. Examples of the comments made by students in the intervention group are as follows:

Having real patients for interview, this gives us a very good opportunity to practice and reflect on how we are doing. This helps us gain confidence and improve our skills.

A very good opportunity for us to have adequate practice. Feedback session was particularly useful, reminds me to have more eye contact, and now I understand more of patient's feelings

For the control group, students found role playing effective in training practice skills, an example of student comments is as follows:

Hands-on practice in low-pressure setting and immediate feedback from teacher. Model answer available to check own performance.

Their performance on the OSCE showed no significant difference between the groups.

Objective

We aim to evaluate the effectiveness of role play to train medical students in history taking, problem identification and problem synthesis, and to assess whether the use of pa-

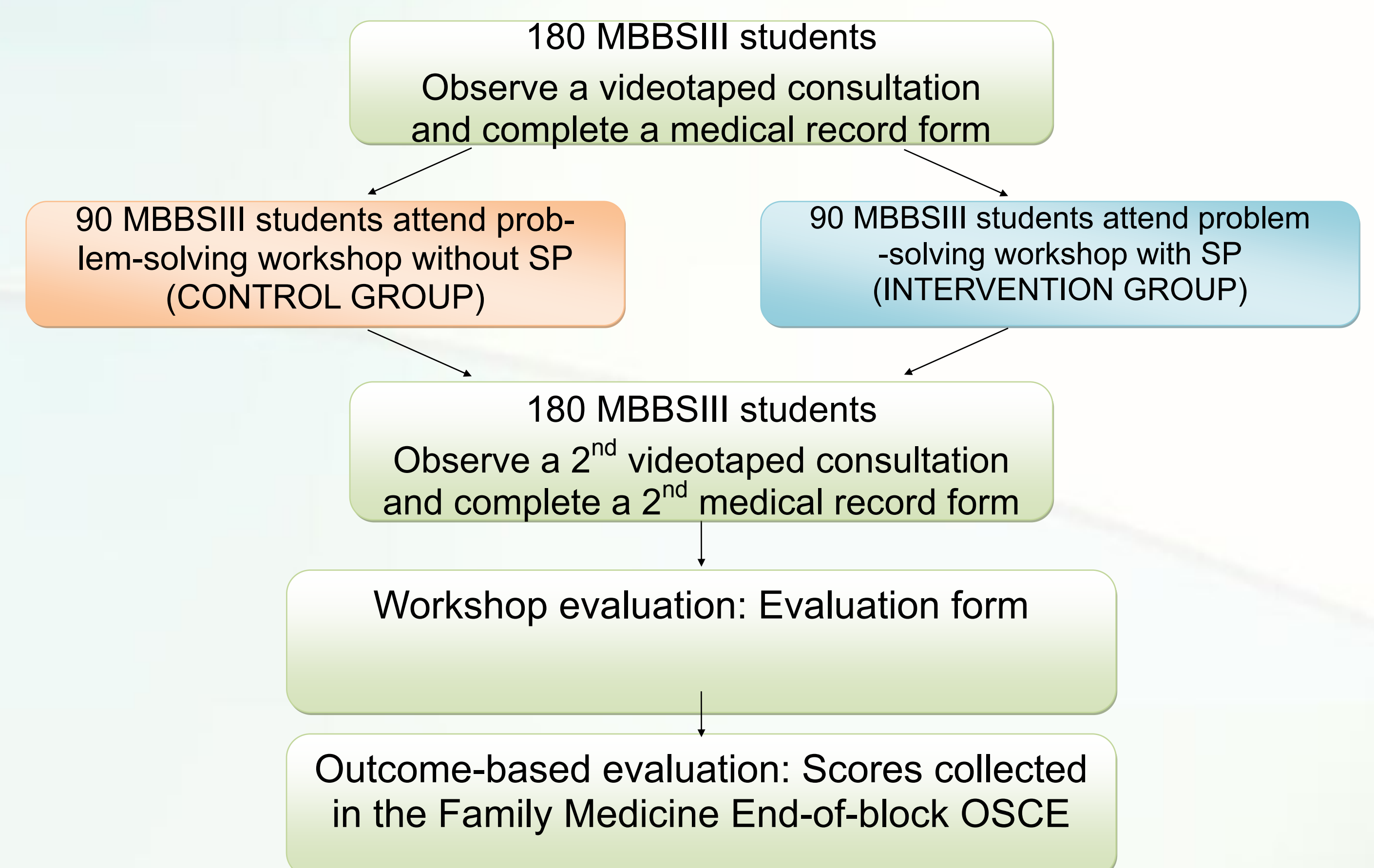


Figure 1. Mixed method study design

Procedure of the workshop

Pre-test assessment	Observe a videotaped consultation and complete a Medical Record Form
Consultation and problem identification skills training	Students paired up to role play as a doctor to take a history while SPs or facilitators role play the clinical cases
Feedback by the SP or facilitator	SPs or facilitator provide feedback regarding to the students' performance on history taking or communication skills
Model Answer	Provide model answer for each clinical case
Problem synthesis and presentation skills training	Present a case history succinctly in 3 sentences as if ringing a consultant to ask for advise
Post-test assessment	Observe another videotaped consultation and complete a Medical Record Form

Conclusion

Role playing clinical cases either with patient volunteers or teachers are both useful for helping medical students to develop practical skills and is an effective approach for problem-solving training.

Use of patient-educators enhances the student learning experience. It fosters better student confidence and skill, and enhances awareness of interpersonal behaviors such as eye contact and empathy. Patients appreciate the opportunity to contribute to training future doctors.

Future workshops might consider an increase in student exposure to patient educators in practical training.

Take-home Message

Structured learning opportunities with patient educators can benefit both students and patients.

Acknowledgement

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