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The effect of using standardized patients or peer role play on ratings of undergraduate communication training: A randomized controlled trial

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ABSTRACT

Objectives: Considering the expense of standardized patients (SP) for training communication skills and the convenience of peer role playing (RP) there is a surprising lack of studies directly comparing the two methods.

Methods: Fifth year medical students ($N = 103$) were assigned to three groups receiving a training in counseling parents of sick children with RP ($N = 34$) or SP ($N = 35$) or to a control group (CG, $N = 34$). We assessed self-efficacy, as well as objective performance in parent–physician communication using questionnaires and the Calgary-Cambridge-Observation-Guide Checklist in a six-station OSCE, respectively.

Results: The training led to an increase in self-efficacy ratings and in the post-intervention OSCE score after RP ($p < .021$ and $p < .001$ respectively) and SP-training ($p < .007$ and $p < .006$ respectively) compared to controls. Surprisingly, this benefit was higher after RP than after SP-training ($p < .021$) due to significantly higher performance in the domain *understanding of parents' perspective* ($p < .001$).

Conclusion: Both RP and SP are valuable tools for training specific communication skills. RP offer a methodological advantage in fostering empathy for patient perspectives.

Practice implications: Both peer-role-play and standardized patients hold specific benefits for communication training. Peer-role-play seems to foster a more empathic approach towards patients' concerns justifying its prominent role in medical curricula.

1. Introduction

"Good communication skills in medical practice are not innate, can be learned, and can always be enhanced" [1]. It has been well established that medical educators should use experimental rather than purely didactic methods to successfully develop and improve communication skills [2] to ensure that acquired skills are sustainably integrated into further clinical practice [3–5]. Both peer role play and training with standardized patients are popular amongst students [6] and present successful methods for training communication skills in both undergraduates and health professionals [7–10]. Both methods allow students to judge their strengths and weaknesses in performance against that of their peers [10]. When taking into consideration the enormous differences in resource requirements between the two methods, surprisingly little comparative data on their specific methodological advantages are available.

Peer role play (RP) is a low-cost tool which is relatively easy to put into practice. RP allows switching of roles to experience both physician and patient perspectives. Through this experience of ambiguities in the communicational processes, the trained communicating partners develop a better understanding of the involved physician–patient interaction dimensions [11,12]. With carefully designed RP training sessions and well-trained tutors, initial skepticisms towards RP may be resolved [6,13]. It provides successful and targeted practice as well as useful feedback, as has already been shown in a training program for aviators [14]. Nevertheless, RP needs careful planning "because it is easy to use badly" [11]. Guidelines for effective role-play include an adequate preparation of the sessions: realistic roles, alignment of roles and tasks appropriately designed for the participants' level of practice and structured feedback [7]. The majority of studies indicate that practicing communication with peers can be very successful and improves communication skills more than using purely didactic methods [10].

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Standardized patient (SP) is an umbrella term both for a *simulated patient*, trained to simulate a patient's illness, and an *actual patient,* trained to present their own illness, both in a standardized way [8,15]. In current practice, the terms *standardized patient* and *simulated patient* are used synonymously. We refer to SP in this publication as *simulated patients* trained in a standardized way. SP are classified as low-technology instruments, but are expensive tools for training communication skills [16]. They provide a high degree of realism and have strong potential for training general and specific communication skills [3,8,17–19]. They are suitable for formative as well as summative assessments of communication skills [9,20]. The key to SP's success is their professional feedback [9,21]. In pediatrics, SP may be integrated into the curriculum as pediatric standardized patients [22] or as standardized *parents* [6,17,23] as done in this publication.

In a recent review which compared the effects of either RP or SP on the training of communication skills, Lane et al. found major methodological weaknesses in studies on the effectivity of the two methods [10]. From the four studies identified in our literature review that directly compared peer role play with standardized patients within one study, the conclusion may be drawn that both methods warrant inclusion in medical curricula and are of comparable effectiveness [6,24–26], and result in the same levels of skills attainment in undergraduates and health professionals [24–26]. However, studies with objective performance measures focused on one specific task only (motivational interviewing for smoking cessation) [24–26] and were thus limited to one specific challenge in communication – namely behavioral change management. It is therefore difficult to draw conclusions about the specific values of peer role play and standardized patients in a broader medical context from these studies. In a previous study we could show that from the student perspective, both RP and SP were very well accepted and rated as realistic and valuable tools for training parent–doctor communication skills in the field of pediatrics. Training with SP provided better pay off and applicability for future real parent–physician contacts compared to RP [6]. However, there is a lack of objective data to date.

Based on the findings of our recent study [6], the aim of this randomized controlled study was to elucidate the effects of both methods on communication competencies as compared to a control group in a broad medical setting. Our hypothesis was that training with RP and SP would yield (i) higher self-efficacy ratings in communication competencies and (ii) better overall scores in objective communication performance measures compared to controls, and that (iii) training with SP, as a more elaborate training tool which aims at providing professional feedback [8,27], would provide an advantage over RP in both measures.

2. Methods

2.1. Subjects, randomization, concealment of allocation, blinding

Fifth year medical students of the University of Heidelberg eligible for their rotation in pediatrics ($N = 103$) were randomly assigned to one of three study groups. Two groups received communication training with either RP (RP group, $N = 34$) or SP (SP group, $N = 35$) in addition to the established course contents, which the control group (CG, $N = 34$) also received. Established course contents were maintained identical in all groups and included seminars, problem-based learning, virtual patients [28], bedside teaching, skills training and placements in private pediatric practices [29]. Due to the fact that Heidelberg medical students frequently opt for rotations abroad and also do so at short notice, there was a drop out of six students.

By their fourth year, each student had attended approximately 40 small group sessions with standardized patients taking the role of a physician or as an observer in other departments of our Medical Faculty.

None of the students opted not to take part in the communication training. Within the training sessions, no student objected to the turn-taking of interviewing or to taking the part of a parent (peer role play). Prior to the intervention, students were asked to complete questionnaires regarding *sex*, *age* (years), and their overall motivation to study medicine (*study motivation*, one item with a 6-point Likert-scale from 1 = very low to 6 = very high). The response rates of the questionnaires were high (PR group 88.2%, SP group 91.4%, control group 100%); see Table 1. For objective assessment of communication skills, students were subjected to an OSCE (see below). Five students opted out of the assessment with the OSCE (see Fig. 1).

A concealment of allocation or blinding of tutors could not be performed due to the nature of the course and the study design.

In light of the described study design and due to the fact that our design monitors the ongoing curriculum development, the University of Heidelberg Ethics Committee waived requirements for an ethical approval procedure.

2.2. Materials

2.2.1. Training cases

Nine training cases which combined the nine most common medical and most common communication problems defined by

Table 1
Age, sex and motivation to study medicine of participating students.

	Control group (CG) *N* (%)	Peer role play group (RP) *N* (%)	Standardized patient group (SP) *N* (%)	RP vs. CG Chi-square *p*-Value	SP vs. CG Chi-square *p*-Value	RP vs. SP Chi-square *p*-Value
Male	$N = 22$ (64.7)	$N = 19$ (61.3)	$N = 15$ (45.5)	$\chi^2 = 0.77$	$\chi^2 = 2.19$	$\chi^2 = 1.38$
Female	$N = 11$ (32.4)	$N = 11$ (35.5)	$N = 16$ (48.5)	n.s.	n.s.	n.s.
Not specified	$N = 1$ (2.9)	$N = 1$ (3.2)	$N = 2$ (6.1)	–	–	–
	Control group (CG) Mean ± SD	Peer role play group (RP) Mean ± SD	Standardized patient group (SP) Mean ± SD	RP vs. CG *t*-Value *p*-Value	SP vs. CG *t*-Value *p*-Value	RP vs. SP *t*-Value *p*-Value
Age	24.6 ± 2.3	23.7 ± .7	25.5 ± 3.0	$t = 1.66$ n.s.	$t = 1.67$ n.s.	$t = 3.35$ $p < .002$
Motivation to study medicine	5.2 ± .6	5.1 ± .6	4.9 ± 1.0	$t = .18$ n.s.	$t = .56$ n.s.	$t = .37$ n.s.

Sex, age (years), and motivation to study medicine (Likert scales from 6 = very high to 1 = very low) of the peer role play group (RP), standardized patient group (SP), and control group (CG). Values as mean and standard deviations (mean ± SD) or *N* and percentages (%). *P*-values indicate χ^2 test results for sex, or post hoc test results following ANOVA for age and study motivation to study medicine respectively.