Using Role-plays as an Empathy Education Tool for Ophthalmology Postgraduate

Abstract

Purpose: To assess the role of an "empathy sensitizing module" (ESM) in ophthalmology postgraduates in promoting effective empathetic communication. **Methodology**: Thirty-nine ophthalmology postgraduates were taught effective empathetic communication using specially designed module, comprising of five illustrative role-plays. We evaluated the impact of the training by (a) self-assessment of empathy quotient by residents using Jefferson Scale of Empathy (JSE scale) before and 6 weeks after ESM training and (b) nonparticipant observation (NPO) by trained faculty in real-life settings over the next 4 months. A peer-validated, self-designed checklist was used for NPO. The change in score was analyzed using Student's paired *t*-test. The faculty observed the use of empathy in real-life patient encounters of the trainees over the next 6 months. In addition, secondary qualitative data were collected and analyzed to assess the impact of the module on other stakeholders such as the role-playing undergraduate students and core faculty. **Results:** Pretraining assessment revealed that concept of empathy during patient communication was understood by only 10% students. PostESM training, the self-rated mean empathy score, on JSE, significantly increased from 95.9 to 106.7 (of a maximum of 140). This was also confirmed by a significant improvement in externally rated empathy and soft skills scores (from 29.3 to 39.1; of a maximum of 55) using the NPO tool. Focus group discussion was done on the continued display of empathy by the trainees in real-life situation over 6 months of observation by the faculty. The group agreed that there was a gradual attrition of initial gain in empathy behavior over the observation period of 6 months. The spillover benefits of the training process were observed among the role-playing undergraduates as well. A thematic analysis of their reflections on the process revealed a substantial change with an improved understanding of effective communication. **Conclusions:** There is a definite scope for introducing empathetic communication in medical training. Empathetic communication can be improved by effective training in a contextual manner with a need for regular reinforcement. Sensitization at all levels including the faculty is required to implement effective communication skills in medical profession.

Keywords: *Communication, empathy, group discussion, postgraduate*

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Introduction

Competency in soft skills is a critical component of medical education but has long been overshadowed by the more measurable acquisition of clinical skills and knowledge. Various accreditation forums have taken cognizance of this omission. The Vision 2015 document of Medical Council of India, for graduate and postgraduate medical students, envisages a structured, longitudinal learning of professionalism, effective communication, and ethical practices.[1-3] The acronym ABCDE defines Attitude and Behavior (ethical and professional), Communication, Diversity, and Empathy as essential components of these soft skills.[4] Among these,

empathy is key for optimal doctor–patient communication.[5] Empathy is defined as engaged curiosity about another's particular emotional perspective. It involves cognitive understanding of patient's emotions, experiences, and concerns related to their sickness. This cognitive component makes empathy a learned behavior and differentiates it from sympathy. Some specific ways for physicians to foster empathy during doctor–patient interaction are as follows: recognizing one's own emotions, attending to negative emotions over time, attuning to patient's verbal and nonverbal emotional messages, and becoming receptive to negative feedback. Incorporation of empathetic behavior during patient encounters has been proven to improve patient satisfaction,

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treatment outcome, and physician well-being and reduce doctor–patient conflict.[6-9]

Current medical curriculum, however, lacks a structured road map to impart training of these essentially learnable ABCDE attributes.[6,7,10] It is expected that the student imbibes these attributes consciously or subconsciously by emulating peers and seniors who, unfortunately, very often may be lacking in the same.[5] This lacuna in our training prompted us to design a module, the empathy sensitizing module (ESM) for imparting and assessing empathy in the student doctor. The tool chosen was role-play as it has been established to be one of the most effective modalities for active learning of affective domain constructs.[11] This article presents our study on the use and success of this ESM module to promote empathy in ophthalmology postgraduate students.

Methodology

After due ethical clearances and requisite permissions, an ESM comprising of five illustrative role-play scenarios was designed. The scripts of these role-plays were written in concordance with Kalamazoo Essential Communication consensus checklist with active listening, understanding patient's perspective, and responding to patient ideas and beliefs incorporating both verbal and nonverbal cues of communication skills.[12]

The scripts dealt with case scenarios of common ophthalmology cases which required counseling of patient or caregiver.

The five scenarios were as follows:
1. Prescription of spectacles to a child with refractive error (dealing with parental anxiety)
2. Motivating a child to undergo patching for amblyopia therapy (understanding the child's perspective)
3. Advising laser treatment for asymptomatic diabetic retinopathy (dealing with patient mistrust and aggression)
4. Improving adherence to glaucoma therapy (attuning to patient's perspective of no improvement in disease)
5. Requesting corneal donation (dealing with grief reaction).

The scripts were subjected to internal and external peer validation by subject experts of ophthalmology and medical education. The scripts were then modified after incorporating the expert feedback. Subsequently, a group of 13 undergraduates (from 2nd to 6th semester) were trained to enact the role-plays. Each scenario was enacted twice, with the doctor protagonist displaying good empathy followed by a mirror scene where doctor emoted low empathy using dominant style.[13] The final ESM module was then administered to 39 ophthalmology postgraduates in a tertiary tier teaching hospital of North India, over two sessions of 2 h each. Before implementation, sensitization about relevance of empathy

was done. All the participants were provided information sheet to get their informed consent to be a part of the study.

Longitudinal impact assessment of ESM training was primarily done by two methods. A self-assessment of empathy quotient by the trainees was done using Jefferson Scale of Empathy-HP version (JSE scale), after requisite permission. It evaluated reaction and learning (Kirkpatrick educational outcome levels 1 and 2) before and 6 weeks after the training. The JSE scale is a content-specific, context-relevant psychometric instrument specifically designed to measure empathy.[14]

To reduce respondent bias resulting from "social desirability phenomenon" where residents would be expected to manipulate answers during self-rating, a more objective assessment of change in behavior, if any (3rd level of Kirkpatrick), was observed and assessed over a 4-month period. This was done during real-time work environment in both outpatient and inpatient settings, by six trained external raters. This co-faculty was imparted training before implementation of ESM by means of a mini workshop. The external raters used a peer-validated, self-designed nonparticipant observation (NPO) checklist incorporating ALPAC sequence of ask, listen, praise, advice, and check to assess both nonverbal and verbal communication attributes.[15] The same was scored with 5-point Likert scale rubrics.

Data analysis was done using Student's paired *t*-test, descriptive statistics, and qualitative data analysis.

Secondary data were collected from the other stakeholder undergraduate medical students (role-players) using a structured questionnaire after 4 months when most of them had started their clinical postings. The structured questionnaire was peer validated before use.

In addition, the external raters continued to observe the use of empathy by the trainees in real-life patient encounters. The feedback was taken from the external raters at 6 months by a focus group discussion, to evaluate long-term impact of the training. The feedback was subsequently transcribed, translated, and coded for thematic analysis.

Results

Thirty-nine ophthalmology postgraduate residents aged 25–29 years (25 females and 14 males) were administered the ESM module. Preassessment revealed that concept of empathy during patient communication was understood by only 10% postgraduate students.

Impact of ESM was assessed by student self-assessment using JSE scale and by faculty assessment using NPO checklist at 6 weeks and 4 months, respectively. Self-rating revealed improvement in mean empathy score from 95.9 to 106.7 (of a maximum of 140). This increase was highly significant with *P* < 0.0001 (paired Student's *t*-test).

External rating by faculty using the NPO mirrored this improvement in empathy and soft skills by observing a change in behavior (Kirkpatrick level 3 outcome) from 29.3 to 39.1, of a maximum of 55 ($P < 0.0001$, paired Student's *t*-test) [Table 1].

An overall shift in empathy scores occurred from being low score centric to high score centric (postESM intervention). The increase was higher in those with lower pre-ESM score. The declining linear trend in Figure 1 depicts the lesser improvement in those with high preexisting score as compared to greater improvement in those with lower preintervention scores.

Feedback from faculty reported unanimous agreement on part for both requirement and beneficial effects of ESM module on residents. The focus group discussion with external raters at the end of 6 months after training unanimously pointed out that the initial effect of ESM on empathy in real patient encounters became diluted over time and old behavior patterns remerged to a certain extent. On further analysis of the discussion, the following codes emerged as possible reasons for this attrition: lack of reward/credit for effective communication, lack of continuous assessment by senior faculty, paucity of time, and patient overload and infrequency of sensitization training. Subtheme which emerged was poor role modeling by senior colleagues to be the key barrier for continued adoption of empathetic communication skills by trainees.
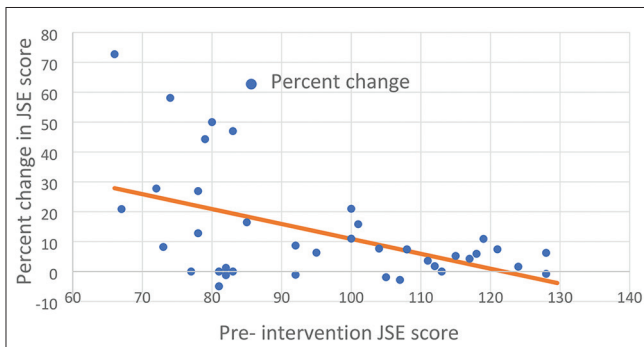

Figure 1: Scatter plot of change in Jefferson Scale of Empathy score as a function of preintervention scores

Reflections of the 13 undergraduate student role-players, by a structured questionnaire, revealed a substantial change in their patient interaction behavior. An improved understanding of effective communication coupled with increased confidence in patient encounters was noted. Qualitative data analysis of the transcripts generated certain codes synchronous with *a priori* codes and few emergent codes, which were subjected to empirical verification. The common themes emerging were as follows: empathy needs to be taught, it is beneficial, and timing should be during 4th–6th semester (before clinical postings). Table 2 elaborates on the thematic analysis of transcripts of stakeholders.

Discussion

The term "empathy" commonly refers to a complex affective–cognitive activity involving emotional attunement and imagining how another person feels.[16] There is increasing evidence that emotionally engaged physicians have greater therapeutic efficacy.[17] Emotionally engaged physicians communicate more effectively, decreasing patient anxiety and improving patients' coping, leading to better outcomes.[18] Conversely, a lack of empathy increases patient dissatisfaction and the risk of malpractice suits.[19]

Studies are inconsistent about how amenable empathy is to educational intervention among medical students and physicians. Some researchers believe that empathy is a personality state that can decline during medical education but can also be improved by targeted educational activities. Others report that empathy is a personality trait that cannot be easily taught.[20,21] The current study suggests that empathy can be effectively taught if delivered in a contextual format.

The low empathy scores in ophthalmology residents are consistent with pattern reported for procedure-oriented specialties (such as ophthalmic surgery), having lower empathy quotient versus people-oriented specialties (medicine, pediatrics).[14]

The visible benefit undergoing attrition over 6 months was an aspect of concern. Faculty sensitization was identified as a lacuna in effective implementation, with role modeling (faculty behavior) being the major determinant

	Self-assessment JSE Maximum score 140			External assessment scores by NPO Maximum score 55		
	Range	**Mean (SD)**	**Median**	**Range**	**Mean (SD)**	**Median**
Pre-ESM	66-128	95.9 (18.4)	95	6 days 15-47	29.3 (6.0)	28
Post-ESM	7777-136	106.7 (17.5)	113	24-49	39.15 (6.0)	39
Difference in rating scores pre- and post-intervention		10.8 (13.5) 95% CI: 0.6-15.3 *P*<0.0001 Highly significant	8.0		9.87 (6.0) 95% CI: 8.3-11.6 *P*<0.0001 Highly significant	10

Table 1: Impact assessment of empathy sensitizing module

JSE: Jefferson Scale of empathy; NPO: Nonparticipant observation; SD: Standard deviation; CI: Confidence interval; ESM: Empathy sensitizing module

Table 2: Thematic analysis of feedback from (a) students who participated in role-plays (b) core faculty

Emergent theme	Codes	Exemplary quote (s)
a. Feedback from role-players		
Empathy needs to be taught	Tool (KWIC)/phrases identified-empathy, sympathy, taught, convincing	Empathy needs to be taught
		Empathy is different from sympathy
		Empathy helps student realize grief of patient
Empathy teaching is beneficial	KWIC words/ phrases-communication, patient, trust, conflict skills, role-play,	Change in deteriorating mindset regarding doctors practice
Subtheme identified		Gaining trust of patient
Patient benefit		Improves my history taking
Doctor benefit		Cheerful patient heals better
Role-play is a good tool for it		Felt great difference while playing role
		Happier playing the empathetic doctor
		While rehearsing role-play, i learnt a lot
Setting theme	Clinical postings, time of training	Before clinical postings during clinical postings
Empathy needs to be taught before clinical postings		
Relationship theme	Seniors, faculty, behavior	Nobody observes students for their communication skills
Role of seniors is critical		E.g., during clinical postings
b. Feedback from core faculty		
ESM is beneficial	KWIC words-communication, patient, conflict	The students were more considerate and responsive to patients
Empathetic behavior enhances doctor-patient relationship	Sensitization, confidence, trust, communication skills	Raised voices and tension during patient examination reduced post-ESM
		Students felt they were being monitored and so were on their best behavior
Barriers in implementing Empathetic communication	Time, patience, credit for effective communication; lack of continuous assessment; feedback; patient overload	No credit for effective communication, instead doctor spends more time and thus sees less patients
Sub theme: gap, mismatch (between what is taught and what is practiced)		Doctors talking rudely and indifferent to patient's problems are their role models
		Infrequent and sporadic sensitization training causes reversal to prior behavior

KWIC: Key word in context; ESM: Empathy sensitizing module

of student behavior. A study by Modi *et al.* also identified this gap between taught and actual behavior of seniors in clinical practice as the main barrier for transfer of learning.[5]

Structured reflection, used as the tool for assessment in our study, has been established to be an effective aid to analyze self-emotions related to affective domain.[22] This tool, used to get undergraduate student feedback, revealed universal agreement about the need to introduce empathy learning and its beneficial effect in enhancing communication. Since frequency and timing of this sensitization have been recognized to be critical in effective implementation of this training,[6,7,14] the same was determined in our study. Feedback revealed the need for early sensitization at undergraduate level, reinforcement at yearly interval, and continued sensitization at postgraduate level to be implemented.

The tool of role-play employed was perceived to be beneficial by creating an instant connect to life such as

situations, student ownership and active participation, visual and auditory impact, removal of communication barriers with teachers, and delivery of simplistic and effective message. The same has been corroborated by Manzoor *et al.*[23]

Conclusions and Recommendations

There is a large potential for introducing empathetic communication in medical profession.[7,14] Role-plays performed by students sensitized two groups of students with differential experiences (undergraduates and postgraduates) effectively. Sensitization of senior faculty was identified as a key motivator to promote or teach empathy in residents and thus, faculty development activity for the same is equally significant.

Identification of low quotient empathy students early on in their training, with targeted ESM training, can positively predict their transformation into competent doctors. Use of role-plays as a method fostered student ownership and

critical thinking, and can make this module feasible and self-sustainable.

Based on our pilot study, we recommend that empathetic communication should be introduced early on during residency and it must be contextual using real-life encounters. For effective learning, formative assessment of ABCDE attributes, through incorporation in a student's logbook and portfolio, needs to be done. Sensitization at all levels, including the faculty, is mandatory for incorporation and continuous implementation of effective communication skills training.

Permission to use JSE (physician version) was obtained from Empathy Projects, Center for Research in Medical Education and Health Care, Thomas Jefferson University, USA.

Conflicts of interest

There are no conflicts of interest.

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