

Communication Skills Training For First-Year Medical Students

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Abstract

This complete-enumeration, before-and-after type of study (without controls), was conducted to determine the effectiveness of communication skills training for first-year MBBS students in improving their knowledge and awareness regarding communication skills. The participants (60 first-year MBBS students, aged 18 years and above, of either gender) were briefed about the study and written informed consent was obtained. The students took a pre-test containing 10 multiple choice questions (one mark each, total 10 marks) pertaining to communication in various situations. Subsequently, these students were trained in communication skills using lecture, case scenarios and role play and a post-test was administered. The questions in the post-test were identical to that in the pre-test. The difference in the overall pre- and post-test scores was significant ($Z=2.811$; $p=0.00494$) but the gender differences in the scores were not significant. This study identified vital areas to be focused upon while imparting communication skills training to medical students. The participants favourably rated the training on communication skills. Teaching communication skills to first-year MBBS students will improve their attitude towards and communication with peers and staff members and also help overcome socio-cultural barriers between students.

Keywords: Communication skills, Medical students, Training.

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INTRODUCTION

An important goal of medical education is that medical students should acquire communicative competence so that they can exchange information with patients and their relatives and with colleagues. Conventionally, medical students informally learned their communication skills by observing and emulating their teachers, peers and colleagues. This so called "hidden curriculum" depended a great deal on chance and has produced disappointing results [1, 2]. Though some basic communication skills may be imbibed by observing senior and peers, these are insufficient [3] and require periodic reinforcement and continual practice so that good communication skills get internalized [4, 5].

In recent years, formal training on communication skills of medical students is being conducted and the training methods include small-group discussions and seminars, lectures and presentations, rounds, student interviews with simulated patients, student observation of faculty with real patients, and student interviews with real patients [6]. Studies have been conducted on formal training and evaluation of communication skills of undergraduate medical students. [7-9] The concept of communication

as bedside manner has been replaced by an amended perception of communication as a measurable clinical skill [10] that is now considered a core area of competency [11, 12]. Patients expect non-judgmental attitude, empathy, and truthful details about the diagnosis, treatment choices, therapeutic side effects and the anticipated respite in symptoms [13]. Proficiency in communication is ranked alongside history taking and clinical examination skills and is an integral aspect of any clinical assessment.

The Medical Council of India envisages an "Indian medical graduate" who is able to communicate effectively [14] and has set aside time for training in communication skills [15]. However, training programs with fixed timings may not yield the required levels of retention and internalization of communication skills. Communication skill of medical graduates has been shown to progressively deteriorate, if not reinforced periodically [4]. One model recommends a three-phase multi-method training with built-in evaluation with progressive increase in the complexity level [16]. Failure to communicate in a simple language devoid of medical terminology, failure to devote adequate time for communicating with patients and their relatives, frequently interrupting the patient's narration of

medical history and conceited opinion of oneself are among the several hurdles in effective doctor-patient communication [17, 18]. Gestures, eye contact, body language, facial expression, touch, and inter-personal distance are vital non-verbal components of communication [18]. Since communication skills are an outcome of a person's attitude and demeanour, its evaluation requires careful observation in a variety of situations. The objective of the present study was to determine the effectiveness of communication skills training for first-year MBBS students in improving their knowledge and awareness regarding communication skills.

MATERIALS AND METHODS

This complete-enumeration, before-and-after type of study (without controls), was conducted at Rajiv Gandhi Medical College in Kalwa, Thane, Maharashtra State, India. This medical college has an intake capacity of 60 students per year for the MBBS course. The participants (first-year MBBS students, aged 18 years and above, of either gender) were briefed about the study. After obtaining written informed consent, a pre-test was administered. The pre-test contained 10 multiple choice questions (MCQs) pertaining to communication in various situations. Each MCQ

carried one mark (total 10 marks). The same students were trained in communication skills using lecture, case scenarios and role play. Subsequently, a post-test was administered. The questions in the post-test were identical to that in the pre-test.

The pre-test and post-test scores were tabulated in Microsoft Excel (Microsoft Corporation, Redmond, WA, USA) and statistically analysed using EpiInfo Version 7.0 (public domain software package from the Centers for Disease Control and Prevention, Atlanta, GA, USA). The standard error of difference between two means (Z value) was calculated. 95% Confidence interval (CI) was stated as: [Mean - (1.96)*Standard Error] - [Mean + (1.96)* Standard Error]. Statistical significance was determined at $p < 0.05$.

RESULTS AND DISCUSSION

Overall Scores

A total of 60 students (30 females and 30 males) participated in this study. The mean score increased from 6.18 ± 1.20 (95% CI: 5.88–6.49) to 6.83 ± 1.33 (95% CI: 6.50–7.17). The difference in the pre- and post-test scores was statistically significant ($Z=2.811$; $p=0.00494$).

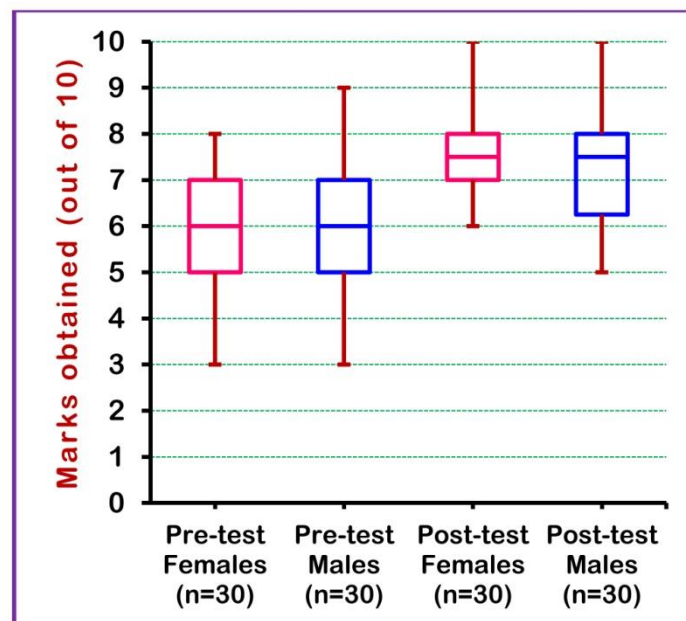


Fig-1: Boxplot depicting pre- and post-test scores

Gender Differences in Scores

The third quartile, median, first quartile and minimum pre-test scores were identical for males and females. But, the maximum score for females (8) was less than that for males (9). In the post-test, the maximum, third quartile and median scores were identical for students of either gender. However, the first quartile and minimum score was less for male students, compared with their male counterparts (Fig-1). The mean score (out of 10) for females increased

from 6.17 ± 1.23 (95% CI: 5.73 – 6.61) in the pre-test to 7.77 ± 0.90 (95% CI: 7.45 – 8.09) in the post-test, while that for males increased from 6.03 ± 1.25 (95% CI: 5.59 – 6.48) in the pre-test to 7.43 ± 1.43 (95% CI: 6.92 – 7.95) in the post-test. However, the gender differences in the scores were not significant in the pre-test ($Z=0.437$; $p=0.662$), as well as in the post-test ($Z=1.102$; $p=0.270$). The higher scores obtained by female students implied that their knowledge and awareness of communication skills was higher than that

of their male counterparts. Significantly higher scores by female students have been reported by a study from

Iran [19].

Table-1: Question-wise mean scores (out of 10) for female students (n=30)

Q. No.	Pre-test	Post-test	Z value #	p value
	Mean (SD)	Mean (SD)		
1	0.67 (0.48)	0.73 (0.52)	0.464	0.642
2	0.20 (0.41)	0.33 (0.48)	1.127	0.259
3	0.90 (0.31)	0.93 (0.25)	0.412	0.680
4	0.87 (0.35)	0.97 (0.18)	1.391	0.164
5	0.67 (0.48)	0.73 (0.52)	0.464	0.642
6	0.27 (0.45)	0.80 (0.41)	4.768	<0.00001*
7	0.67 (0.48)	0.93 (0.25)	2.631	0.008*
8	0.90 (0.31)	0.97 (0.18)	1.069	0.285
9	0.13 (0.35)	0.40 (0.50)	2.423	0.015*
10	0.80 (0.41)	0.93 (0.25)	1.482	0.138

SD = Standard deviation; # Standard error of difference between two means; *Significant

Question-Wise Differences In Scores

The differences in pre- and post-test scores for female students were highly significant for question No. 6 (Z=4.768; p<0.00001) and significant for question

No. 7 (Z=2.631; p=0.008) and question No. 9 (Z=2.423; p=0.015) (Table-1). For male students, the difference in pre- and post-test scores was significant only for question No. 7 (Z=2.631; p=0.008) (Table-2).

Table-2: Question-wise mean scores (out of 10) for male students (n=30)

Q. No.	Pre-test	Post-test	Z value #	p value
	Mean (SD)	Mean (SD)		
1	0.70 (0.47)	0.83 (0.38)	1.178	0.238
2	0.17 (0.38)	0.27 (0.45)	0.930	0.352
3	0.87 (0.35)	0.97 (0.18)	1.392	0.164
4	0.83 (0.38)	0.90 (0.31)	0.782	0.434
5	0.83 (0.38)	0.97 (0.18)	1.824	0.682
6	0.43 (0.50)	0.60 (0.50)	1.317	0.187
7	0.67 (0.48)	0.93 (0.25)	2.631	0.008*
8	0.87 (0.35)	0.90 (0.31)	0.351	0.725
9	0.20 (0.41)	0.37 (0.49)	1.457	0.145
10	0.47 (0.51)	0.70 (0.47)	1.816	0.069

SD = Standard deviation; # Standard error of difference between two means; *Significant

Feedback from Students

29 females and 28 males (n=57) gave their written feedback about the communication skills training. There were no significant gender differences in the feedback. 71.92% opined that communication skills training was needed during medical training, 82.45% felt that it was necessary to become a good doctor, 80.70% mentioned that they would communicate more effectively if the training was periodically reinforced, while 82.45% stated that communication skills training would help establish mutual respect among colleagues. The results of the present study are corroborated by that of studies from Tamil Nadu [20] and north Kerala [21].

Teaching communication skills to first-year MBBS students will improve their attitude towards and communication with peers and staff members of various categories [22]. Medical students come from diverse socio-cultural backgrounds and the lack of interactions between such students may adversely affect their

learning process [23]. In order to surmount this socio-cultural barrier in the first year of the MBBS course, it is necessary to conduct training in communication skills using a variety of methods, such as, lectures, audio-visuals and role play.

CONCLUSION

This study facilitated the identification of crucial areas to be focused upon while imparting communication skills training to medical students. The participants favourably rated the training on communication skills. For retention and internalization of communication skills, students will need to practice communication skills in simulated or real-life situations and get evaluated. Teaching communication skills to first-year MBBS students will improve their attitude towards and communication with staff members and also help overcome inter-student socio-cultural barriers.

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