International Journal of Community Medicine and Public Health
Chavan KD et al. Int J Community Med Public Health. 2019 Aug;6(8):3634-3638
http://www.ijcmph.com
pISSN 2394-6032 | eISSN 2394-6040

DOI: http://dx.doi.org/10.18203/2394-6040.ijcmph20193500

Original Research Article

Doctor-patient relationship: effectiveness of an intervention training module on knowledge and attitude of resident doctors

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Received: 07 July 2019
Accepted: 23 July 2019

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ABSTRACT

Background: The mutual trust between doctor and patient, an indispensable part of the healthcare, is weakening day by day. This has resulted in unwanted incidences of violence and attacks on doctors. Communication between doctors and patients is an integral part of the relationship and is one of the major determinants of mutual trust. Apart from the knowledge and skills required to treat a disease, communication skill is an indispensable part of a doctor's professional life. The resident doctors do not get a chance to learn and implement the communication skills required for the doctor patient relationship.
Methods: An interventional study was carried out amongst 377 resident doctors of first to third year, from randomly selected medical colleges of Maharashtra having postgraduate courses in clinical subjects and affiliated to Maharashtra University of Medical Sciences, Nashik, Maharashtra during the period of February 2017 to January 2019.
Results: There was significant difference in the pre and post test scores for quantified knowledge in relation to training in communication skills ($p<0.0001$), and also significant difference in the pre and post test scores for quantified knowledge in relation to basic doctor patient relationship, suggesting that the intervention was effective in improving the communication skills.
Conclusions: The study has shown that there was significant difference in the pre and post test scores for quantified knowledge in relation to being doctor, basics of communication skills, doctor patient relationship, communication in special situation, and training in communication skills.

Keywords: Doctor-patient relationship, Intervention training module, Knowledge, Resident doctors

INTRODUCTION

Communication between doctors and patients is an integral part of relationship and is a major determinant of mutual trust. Apart from knowledge and skills required to treat a disease, communication skill is an indispensable part of a doctor's life. However these skills are not focussed in the curriculum of postgraduate medical courses. The resident doctors don't get a chance to learn and implement the communication skills required in the doctor patient relationship. Most of the patients approaching the government hospitals are not very demanding and may accept the minimal communication as long as they get their required treatment. Majority of the patients will speak the local language. Therefore, the trainee doctors do not require enforcing any other language other than the local language to converse in non-medical context with this category of patients. This

continues throughout their training. This may lead to poor demonstration of empathy towards patients which further leads to a major rift between doctors and patients.

Recently, access to information has become very easy. Today's patients come to a doctor with a lot of information acquired mainly from the internet.[1] These patients try to verify the treatment process undertaken by doctors and are prepared to confront their doctor. Most patients are aware about certain unethical practices prevalent in the medical profession. Media has recently highlighted many incidents when patients have suffered at the hands of doctors. This kind of regular news coverage has fuelled anger against medical professionals. Unfortunately, Even the ethical and professionally acclaimed doctors, have to face the undue anger of the society.

When patients confront doctors in a state of mistrust and anger, any lack of communication adds fuel to the fire.[2] This can lead to an undue misunderstanding. The actual physical violence or attack is just the tip of the iceberg.

The growing unhappiness and mistrust among the patients and relatives against the doctors and entire health care system is the major problem. In order to avoid violence and litigations, the main aim and focus should be to develop trust and respect with patients. Patients want doctors who treat them using their medical knowledge and skills as well as communicate with them effectively and ethically.[3]

Improving communication skills for residents is a challenge for all residency programs in the country. Addressing this improvement can have many beneficial effects including improved patient outcomes and high level of confidence that residents can acquire as capable physicians and surgeons. Communication is fundamental to the physician-patient relationship. Currently, poor communication is a significant problem affecting the medical profession. The Royal College of Physicians and Surgeons Can MEDS 2000 project recognizes that communication is essential to the provision of "humane, high quality care" by specialists.[4]

Unfortunately, even a quick perusal of the literature reveals that physicians lack knowledge and training in how to communicate news effectively, and deal with the emotional response to such news. Even more concerning, studies show that communication skills do not improve and may even worsen in the course of training due to the perceived lack of value in effectively communicating on the part of more senior physicians, the lack of good role models and physical and emotional fatigue.[5]

Hence this study was carried out to test the efficacy of an intervention training module to improve the knowledge and attitude towards communication skills and doctor patient relationship amongst resident doctors.

METHODS

An interventional study was carried out amongst 377 resident doctors in Medical Colleges having postgraduate courses for more than three years and rendering patient care including diagnostic and treatment facilities in the teaching hospital.

The study population consisted of resident doctors of first year to third year, from randomly selected medical colleges of Maharashtra having postgraduate courses in clinical subjects and affiliated to Maharashtra University of Medical Sciences, Nashik, Maharashtra during the period of February 2017 to January 2019.

Required sample size was calculated using G* power software.[6,7] Following parameters were considered for calculating the sample size, based on the findings of the pilot study.

- Type 1 error (α error) = 0.05
- Type 2 error (β error) = 0.2
- Power = 1 – β = 0.8
- Effect size = 0.15
- Tails = 2 (Two tailed)

Considering above parameters, the required sample size was 377.

In order to meet desired sample level, a multistage sampling was used. The primary sampling unit of the study was Medical colleges and the secondary sampling unit was residents studying in clinical subjects as well as Community Medicine and Pathology.

Inclusion criteria

Inclusion criteria were medical colleges affiliated to Maharashtra University of Health Sciences; medical colleges having post graduate courses in clinical subjects as well as Community Medicine and Pathology for more than three years; resident doctors pursuing post graduate medical education under Maharashtra University of Medical Sciences.

Exclusion criteria

Exclusion criteria were medical colleges not willing to accept the intervention and not willing to take part in the study; medical colleges that conducted the training on communication skills before the study; resident doctors not willing to undergo the training on communication skills.

The study intervention was designed by referring the literature on doctor patient relation and communication skills. The intervention was training module on "Communication Skills in Health Care'' designed with five subsections as mentioned below.

- Section 1- Being a mindful doctor.
- Section 2- Basics of communication skills.
- Section 3- Doctor-patient relationship.
- Section 4- Communication in special situations.
- Section 5- Training in communication skills.

All the sections of the module were composed with learning objectives and expected outcomes. Appropriate teaching methodology involving didactic lectures, activities, group discussions, role plays, group activities etc.[8] were involved in the modules. As mentioned in the literature depicted to communication skills, experimental methods like role plays or interaction with simulated and real patients were used.[9,10]

The materials and resources required for the training module were mentioned in each section. The duration of each section was 75 minutes. The training was conducted by a specially trained person at all the centres, to avoid the bias. A pilot study was conducted involving 106 samples from 2 colleges. The outcome of the pilot study was used to fine tune the pre and post-test study questionnaire. The data collection methodology was also tested in the pilot study. The effective size determined in the pilot study was used to estimate the required sample size for this study.

The study was aimed to evaluate the effectiveness of the training module intervention in communication skills among the resident doctors. A structured proforma was designed and questionnaire was validated.

The questionnaire consisted of five questions each for each subsection to which the study subject responded. Responses to each one of the question was recorded using a five point Likert scale i.e. 1 to 5 (1. Strongly disagree (SD), 2. Disagree (DA), 3. Uncertain (U), 4. Agree (A), 5. Strongly agree (SA)).[11]

Initially, all the responses were analysed individually and then the section-wise analysis was done. Wilcoxon Sign rank test was used to test the statistical significance in pre and post responses. After analysing the individual responses, a quantified score was calculated for each of the five above mentioned sub sections. To calculate the quantified score, all five questions in a sub sections were considered. To determine the effect of socio demographic variables in change in score for each sub section, a linear regression model was used, in which change in quantified score was used as dependent variable and various socio-demographic variables were used as independent variables. If any of the regression coefficients was found to be significant, it was concluded that the change in score, for that sub sections, was significantly correlated with that variable. SPSS version 21 was used for statistical analysis.

RESULTS

In this study 53.3% participants of the study were male residents and 46.7% were female residents. It was seen from Table 1 that total 88.86% resident doctors from the study were from urban background and only 11.14% were from rural background.

Table 1: Distribution of study respondents as per socio-demographic characteristics (n=377).

Parameter	Response	Male		Female		Total	
		No.	%	No.	%	No.	%
Area of residence	Urban	178	47.21	157	41.64	335	88.86
	Rural	23	6.10	19	5.03	42	11.14
Close relative of the respondent as a doctor	Yes	92	24.40	76	20.15	168	44.56
	No	109	28.91	100	26.52	209	55.44
Participation in communication skill training/workshop earlier	Yes	51	13.52	38	10.07	89	23.61
	No	150	39.78	138	36.60	288	76.39
Knowledge about local language	Yes	138	36.60	110	29.17	248	65.78
	No	63	16.71	66	17.50	129	34.22

The distribution of male and female residents in the respective group of urban and rural is almost same. Total 44.56% residents had at least one member from their close relatives as a doctor. Only 23.61% residents revealed that, they have undergone the training of communication skills in the past. In the present study, around 65.78% residents were able to read, write and speak the local language of the region where they are practicing.

It was observed from Table 2 that there was significant difference in the pre and post scores for quantified knowledge in relation to "being a mindful doctor" ($p=0.015$), suggesting that the intervention was effective in improving the communication skills limited to that part.

As Table 3 shows that there was significant difference in the pre and post test scores for quantified knowledge in relation to "basics of communication skills" ($p<0.0001$), suggesting that the intervention was effective in improving the communication skills limited to that part.

It was evident from Table 4 that there was significant difference in the pre and post test scores for quantified knowledge in relation to "basic doctor patient

relationship" (p<0.0001), suggesting that the intervention was effective in improving the communication skills limited to that part.

Table 2: Change in quantified knowledge and attitude in relation to being a mindful doctor.

Test	Mean	SD
Pre-test*	4.03	0.53
Post-test*	4.09	0.54
Z-value (Wilcoxon-test)	2.42	
P value	0.015	
Effect size	0.12	

Table 3: Change in quantified knowledge and attitude in relation to basics of communication skills.

Test	Mean score	SD
Pre-test*	3.76	0.54
Post-test*	3.87	0.62
Z-value (Wilcoxon-test)	3.89	
P value	<0.0001	
Effect size	0.20	

Table 4: Change in quantified knowledge and attitude in relation to basics doctor patient relationship.

Test	Mean score	SD
Pretest*	3.59	0.45
Posttest*	3.72	0.46
z-value (Wilcoxon-test)	5.04	
P value	<0.0001	
Effect size	0.26	

Table 5: Change in quantified knowledge and attitude in relation to communication in special situation.

Test	Mean score	SD
Pre test	2.26	0.65
Post test	2.06	0.73
z-value (Wilcoxon-test)	-5.95	
P value	<0.0001	
Effect size	-0.31	

It was seen from Table 5 that there was significant difference in the pre and post test scores for quantified knowledge in relation to "communication in special situation" (p<0.0001), suggesting that the intervention was effective in improving the communication skills limited to that part.

It was revealed from table 6 that there was significant difference in the pre and post test scores for quantified knowledge in relation to "training in communication skills", (p<0.0001), suggesting that the intervention was effective in improving the communication skills limited to that part. So, table 2 to 6 shows that the intervention was successful in improving the communication skills in all five sections of communication skills, as defined in this study.

Table 6: Change in quantified knowledge and attitude in relation to training in communication skills.

Test	Mean score	SD
Pre-test*	3.99	0.60
Post-test*	4.19	0.66
z-value (Wilcoxon-test)	6.44	
P value	<0.0001	
Effect size	0.33	

DISCUSSION

The study has shown significant change in the post intervention scores suggesting that the module is effective in imparting the skills. The study has revealed that, there is significant change in the quantified knowledge and attitude of the residents towards the basics of communication skills after the intervention of teaching. Similarly in the study conducted by Catherine et al, it was reported that students receiving professional development teaching in the communication skills were judged to be better at being silent, not interrupting the patient and keeping the discussion relevant, which are most important components of communication skills.[12] Another study conducted by Michael et al, on the effect of communication skill training on medical student's performance also reported that, dedicated communication curricula significantly improved student's competence in performing skills known to affect the outcome of care.[13] A randomized control trial done among dental students in India also highlighted that a course on communication skills improved the student-patient interaction leading to a good doctor patient relation.[14] In another study by Joekes et al, it was found that students who received training in communication skills as a part of professional development showed significant improvement compared to their counterparts.[12] The students exposed to intervention showed significant improvement in the post-test assessment. In another study involving medical students undergoing surgical clerkship, improvement was noted in communication skills after a six-hour training workshop.[15]

A study by Irene et al, reported positive outcomes of structured, comprehensive training program which were replicated in different samples they studied. These positive outcomes were reflected, each year, in statistically significant increase in confidence, self-rated by participants, and in communication skills, assessed by external observers.[16] Study by Amy et al also reported increased skill levels compared with resident's baseline ratings. Their results also suggested that, in the medical ICU setting, a brief, on-site, theoretically informed communication program that is integrated into clinical training for internal medicine residents is associated with strongly positive family member outcomes and

significant improvements in residents' perceived communication skills.[17]

However, few studies have proved that, communication skills tend to decline with time unless they are regularly recalled and practiced.[18,19] Structured communication skills training is still needed in graduate training and should be tailored to junior doctors' needs and work context in order to be successful and well perceived.[20]

CONCLUSION

The study has shown that there was varied knowledge about the communication skills among the resident doctors. There was significant difference in the pre and post test scores for quantified knowledge in relation to being a mindful doctor, basics of communication skills, doctor patient relationship, communication in special situation, and training in communication skills. The study outcome indicates that training module on "Communication Skills in Health Care" resulted in significant change in the quantified knowledge and attitude of the resident doctors in relation to "all five sections mentioned; suggesting that the intervention was effective in improving the communication skills among the resident doctors.

Funding: No funding sources
Conflict of interest: None declared
Ethical approval: The study was approved by the Institutional Ethics Committee

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Cite this article as: Chavan KD, Giri PA, Mumbre SS, Bangal RS. Doctor-patient relationship: effectiveness of an intervention training module on knowledge and attitude of resident doctors. Int J Community Med Public Health 2019;6:3634-8.