

Original article:

Effect of training intervention on mindfulness among the resident doctors in teaching hospitals of Maharashtra

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Abstract:

Introduction: The concept of being mindful is gaining an extensive acceptance and popularity, especially in the medical world. Being a mindful doctor is a prime need of medical profession. With this background, an interventional study was conducted to identify the effectiveness of a training intervention on knowledge and attitude among the resident doctors.

Methodology: The study setting was the Medical Colleges having postgraduate courses and rendering the patient care involving residents using diagnostic and treatment facilities in the teaching hospital. The study population was the resident's doctors of first year to third year, from randomly selected medical colleges of Maharashtra. The study intervention was designed by taking reference from the literature mentioning the doctor patient relation and communication skills.

Results and conclusion: There was significant difference in the pre and post scores for quantified knowledge in relation to "being a mindful doctor" ($p=0.015$). So the training to the resident doctors resulted in significant change in the quantified knowledge and attitude in relation to "being a mindful doctor", suggesting that the intervention was effective in improving knowledge and attitude with respect to mindfulness.

Keywords: Mindfulness, resident doctors

Introduction:

The foundation of a quality healthcare service is the patients' "trust" in the healthcare, which is nurtured by the doctor patient relationship. Along with the proper medical knowledge and competent skillset, a doctor duly needs to demonstrate humanity, healthy behaviour, as well as sensible communication with patients which can build the sustainable 'trust' in the treatment offered by that doctor. The current

medical education is enormously focused on providing competent medical knowledge in the anticipation of making competent doctors. Competencies focused on developing empathy in graduating doctors are required in medical education but those are not observed evident in the current scenario. The curricular learning of practical skills is offered up to an extent of fulfilment of academic competencies. The focus of training has been the intellectual

development of the trainee and very little importance has been given to the development of emotional intelligence of the trainee. In modern medicine, the way health care is delivered is changed a lot. The traditional doctor patient relation has been replaced by professional client approach. This leads to burnout and hence, the occupational hazards such as anxiety, depression, substance abuse etc. have become common and are largely focused by the researchers during the investigations of clinician's stress and burnout.^[1-3] In order to overcome the challenges like this, mindful practice has been proposed which is expected to reduce stress and burnout among health care professionals through a number of pathways linked to the tenets underlying the philosophy of practice.^[4]

Methodology:

Study design – The study is a subset of an interventional study to describe and interpret the resident doctors pre and post intervention impressions about communication skills.

Study setting - The study setting was the Medical Colleges having postgraduate courses and rendering the patient care involving residents using diagnostic and treatment facilities in the teaching hospital.

Study Population - The study population was the resident's doctors of first year to third year, from randomly selected medical colleges of Maharashtra.

Sample Size -Required sample size was calculated using G* power software^[7, 8]. 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 = $1 - \beta = 0.8$, Effect size = 0.15, Tails = 2 (Two tailed). Considering these parameters, the required sample size was 368.

Study period –The study was conducted between February 2017 to January 2019.

Inclusion Criteria:

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

Exclusion Criteria

1. Medical Colleges not willing to accept the intervention and not willing to take part in the study.
2. Medical colleges who conducted the training on communication skills before the study.
3. The resident doctors not willing to undergo the training on communication skills.

Sampling Technique -A multistage sampling techniques 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.

Training Module and Study Intervention

-The study intervention was designed by taking reference from the literature mentioning the doctor patient relation and communication skills. The intervention was training module on “Communication Skills in Health Care” designed with five sections viz. Section 1 - Being a Mindful Doctor, Section 2 - Basics of Communication Skills, Section 3 - Doctor-Patient Relationship, Section 4 - Communication in Special Situations and Section 5 - Training in communication Skills. However, in this article the impressions about Section 1 are only interpreted.

Data Collection Tool -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.

Data Collection- The primary data and pre-test impressions of the resident doctors were recorded from the residents before training. After the data collection the communication skill workshop was conducted as per the training module and immediately after the

workshop, the post intervention data collection was carried.

Data analysis- Wilcoxon Sign rank test was used to test the statistical significance in pre and post responses. Quantified scores (pre and post intervention) were tested for significant differences using Wilcoxon sign rank test.

Results:

Table 1: Knowledge and attitude of the resident doctors on various parameters of “Being a Mindful Doctor”

Parameter	Scale	Pre-Test Score		Post-Test Score		P Value
		Freq.	%	Freq.	%	
Doctor has a duty to provide reasonable care to a patient only when a patient pays the fee	Strongly Disagree	184	48.8	208	55.2	0.682
	Disagree	130	34.5	91	24.1	
	Uncertain	23	6.1	23	6.1	
	Agree	22	5.8	28	7.4	
	Strongly Agree	18	4.8	27	7.2	
Emotional intelligence has an important role in team building	Strongly Disagree	8	2.1	9	2.4	<0.0001
	Disagree	6	1.6	7	1.9	
	Uncertain	25	6.6	13	3.4	
	Agree	172	45.6	96	25.5	
	Strongly Agree	166	44.0	252	66.8	
A Doctor has a duty to completely cure the patient	Strongly Disagree	19	5.0	20	5.3	0.552
	Disagree	88	23.3	85	22.5	
	Uncertain	73	19.4	75	19.9	
	Agree	136	36.1	126	33.4	
	Strongly Agree	61	16.2	71	18.8	
Health is defined as complete physical and mental well-being of the patient	Strongly Disagree	11	2.9	22	5.8	<0.0001
	Disagree	19	5.0	42	11.1	
	Uncertain	11	2.9	16	4.2	
	Agree	185	49.1	161	42.7	
	Strongly Agree	151	40.1	136	36.1	
Mindfulness can help to prevent burnout in the doctor	Strongly Disagree	6	1.6	4	1.1	<0.0001
	Disagree	7	1.9	4	1.1	
	Uncertain	39	10.3	18	4.8	
	Agree	194	51.5	125	33.2	
	Strongly Agree	131	34.7	226	59.9	

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	

*Quantified knowledge was calculated by transforming the pre and post scores

Discussion:

The concept of being mindful is gaining an extensive acceptance and popularity, especially in the medical world. Being a mindful doctor is a prime need of medical profession. Mindfulness is defined as a psychological process in which attention is focused on living in the current moment. Jon Kabat - Zinndrawing on his long experience and many studies at the University of Massachusetts Medical School in Worcester, described mindfulness as the practice of moment-to-moment, open-hearted awareness, focused in the present moment.^[5]

The doctors need to develop mindfulness, which will help them to focus on the present moment and make them aware of the happenings around them. If this happens, they will be able to become attentive and thereby, their ability to grasp good skills will improve. Mindfulness will help the trainees to get involved in their work. This will help them to look at their patients in a holistic manner and refrain them from considering the patient just merely as the subject of treatment and an object of their academic learning. Mindfulness will help in creating awareness as well as acceptance of their current situation. The recognition of the importance of doctor patient relationship and communication skills in medicine has a reverberant relevance with the discipline of primary care physician. This discipline has long focused on the significance of the

doctor patient relationship intrinsic to the optimum quality of health care delivery.^[6]

The study was conducted across 10 medical colleges in the state of Maharashtra involving 201 male and 176 female resident doctors with 53.7 % and 46.7 % contribution by respective genders. Table 1 elaborates various aspects of Being Mindful Doctor as reflected from the resident’s point of view before and after the intervention. It is seen that, 48.8 % residents strongly disagreed to the statement that, doctors should provide the reasonable care only when patient pay the fees. However, after the training intervention to the residents the number has slightly increased to 55.2 %. This was followed by 34.5 % residents who disagreed to the statement before the intervention and 24.1 % residents after the intervention. Hence, total 83.3 % residents before the intervention and 79.3 % residents after the intervention were against the fact of money minded practice where the consultation charges will determine the patient care. Only, 10.6 % doctors before intervention and 14.6 % residents after intervention agreed to the fact that it is the money which determines the reasonable patient care. However, the p value here reflects that the results obtained are not statistically significant.

Around 89.9 % residents agreed that, emotional intelligence is important in team building. Out of this around 44 % residents strongly agreed to this fact. After the intervention this number has straightaway gone as high as 66.9 %, they

strongly agreed that emotional intelligence has important role in team building. Overall number of residents agreed to this fact after intervention was 92.3 % as compare to 89.9 before the intervention. However, the percentage of residents who did not agree with the statement and uncertain about it was reduced from 10.3 % to 7.7 % after the intervention. The overall change was highly significant with $P < 0.0001$.

60 % residents agreed that doctor has the duty to completely cure the patient. Out of this, 16.4% strongly agreed to it. After the intervention, 19.8 % residents strongly agreed towards a doctor's duty in completely curing the patients. This was followed by slight decrease in the percentage of residents agreeing to it i.e. from 60 % to 52.2 %. However, the percentage of residents who did not agree with it and uncertain about it was not changed, it remained same i.e. 47.7 %. The data however was not statistically significant.

89.2 % residents agreed that health is the complete physical and mental well-being of the patient. Out of which 40.1 % residents strongly agreed to the statement. The percentage of residents who agreed with the statement reflected change from 88.9 % to 78.8 %, after the intervention was carried out. While, the percentage of residents who were uncertain about it and disagreed with the statement; was also affected and the percentage of such students was found to be changed from 10.8 % to 21.1%, after the intervention. The results obtained are highly significant with $P < 0.0001$.

There was a significant increase in the percentage of residents, strongly agreeing to the statement from 34.7 % to 59.9% communication skill training with structured module. This was followed by remarkable decrease in the percentage of residents who just agreed to the statement, i.e. from 51.5 % to 33.2 %. Hence, the

training had strong impact on the residents and maximum residents were turned from just agree to strongly agree. On the other side the percentage of residents who were uncertain about it and were disagreeing with the statement, changed from 13.8 % to 7 %, after the intervention. The results are highly significant with $P < 0.0001$.

It is evident that the mindfulness training can help in reducing the stress and increase the self-compassion among the medical students.^[9] Doctors can also perceive the positive impact of the mindfulness based interventions on their wellbeing and performance.^[10] The interventions can be well received by the doctors and help in increasing the mindfulness practice and is a feasible way to introduce the mindfulness in clinical setting.^[11] Mindfulness trainings are also reported to increase psychological functioning of the health care providers.^[12]

The interventional studies of this kind were carried out by many researchers to improve the knowledge and attitude of the doctors^[13] and they have reported significant change in the student's overall competence as well as their skills of relation building and shared decision making.^[14] An experiential communication skills training model of relationship-centred communication successfully improved participating physicians' self-reported empathy and burnout^[15]. This indicates that the knowledge and attitude in relation to being mindful doctor can be achieved after proper intervention and the present study was able to increase it with an intervention in the form of training module. The statistics which follows the discussion has also proved the same fact.

Table 2 shows that there was significant difference in the pre and post scores for quantified knowledge in relation to "being a mindful doctor" ($p=0.015$). So the training to the resident doctors resulted in significant change in the quantified

knowledge and attitude in relation to “being a mindful doctor”, suggesting that the intervention was effective in improving knowledge and attitude with respect to mindfulness.

Conclusion:

The pre-test impressions have shown that there was varied knowledge with a

superficial attitudes and behaviours towards mindfulness among the resident doctors. The intervention has imparted a significant difference in the post test scores for quantified knowledge in relation to being a mindful doctor indicating the need and effectiveness of the intervention on mindfulness.

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