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Exploring ATCOM (Attitude and communication) – Medical students attitude towards doctor patient relationship

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ABSTRACT

BACKGROUND: For establishing a successful doctor-patient relationship *an* effective doctor-patient communication is needed. Medical student's attitude towards the patient-doctor relationship has not been studied previously in India and hence it deserves our serious attention. We initiated this study with the aim to assess the leaning of medical students towards doctor or patient centeredness after implementing a new curriculum (Attitude and Communication module) for Second year students and compared them with other professional year students.

OBJECTIVES: To assess the attitude of students towards doctor-patient communication and to assess the impact of the AT-COM module (new curriculum introduced) among medical students from different years.

MATERIALS AND METHODS: A Descriptive, Cross sectional study was conducted and the study participants were interviewed using a standardized and validated questionnaire Patient Practitioner Orientation Score (PPOS). The analysis was done using SPSS software version 20.

RESULTS: A total of 200 study participants were interviewed from all the four MBBS professional years. The mean PPOS for the entire sample was 3.36 (± 0.53 S.D). Second year students who were exposed to ATCOM module showed more patient centered behavior (Mean 4.00 ±0.59 S.D) than other professional year students. Also female gender showed more patient centered behavior (Mean 4.01 ± 0.26 S.D) than male counterpart (Mean 3.39 ± 0.53 S.D).

CONCLUSION: Our study suggests that medical school curricula should contain specific interventions aimed towards attitude and communication where patient-centered attitudes are fostered among the students who are the future doctors.

KEYWORDS : Attitude and communication module, Doctor centered, Patient centered, Doctor-patient communication.

INTRODUCTION

"The patient will never care how much you know, until and unless they know how much you care."[1] Years back inmedicine; there was anauthoritarian approach to deciding what should be done for a patient: the patient obliged to the recommendation without any questions as the doctor knew the best. This era is fast ending, and it isnow being replaced withshared decision-making where both the doctor and the patient play an unbiased role. [2] An important element of care is a good doctor–patient relationship. [3] For establishing a successful doctor-patient relationship and also forimplementing high-quality health carean effective doctor-patient communication is needed. [4]

Communication doesn't merely mean by words. It is beyond words, the smiles and head nods of agreement, eye contact,and the grimaces of pain, the voice of anxiety, posture and many othergesturesis indicative of interpersonal dominance. All of these non-verbal expressions give context and speak the loudest. Despite its importance, awareness of the nature of this talk is often not so high due to several reasons. The conversation between a doctor and patient often feels very habitual. The conversation most times are highly scripted and do not leave many options. It is usually like a question-answer routine of a medical history taking.[5]

Communication skills are an indispensible part for professionals in all walks of life.If a doctor is not particularly good at communicating then the patient may feel ignored and neglected even if the doctor has mastered in his area of work and is well learned.Talk has powerful outcomes.From the quality of exchange with a doctor a patient's verymotivation to get well can be seen. Communication should help in the development of the doctor-patient relationship because the relationship itself has the power to shape the processes and outcomes of care. Good communication conveys that the doctor has the best interests of the patient in mind.

The two main challenges facing the medical profession in this era are a need for effective communication between patients and doctors and a rapidly rising demands from patients for active participation in medical decision making rather than being a passive listener.[6,7]

Today, India has the most number of medical colleges in the world.[8] This unrivalled growth has occurred in the past two decades in response to increasing health needs of the country. The globalization of education and health care and also India's potential as a destination of choice for quality education and health care has brought this issue into sharper focus. Medical student's attitude towards the patient-doctor relationship has not been studied previously in India and hence it deserves our serious attention. Medical schools usually don't give much concern to communication skills, humanistic attitudes, and professional values. They usually focus on medical subjects alone.[9] A good medical school is one that inculcates these skills and attitudes in students. However, several studies have reported that there is a decline in positive attitudes between entry and graduation.[10-14] Recognizing the importance of attitude and communication between a doctor and a patient, medical colleges have attempted to strengthen teaching and learning in this area. [15]

The Medical council of India in its wisdom sees it fit to formalize attitudinal and communication skills as an integral part of the education process. [16] The ATCOM (Attitude and Communication) module has been prepared by the MCI as a guide that will help student acquire the necessary competence in the attitudinal and communication domain.

This study is intended to explore the medical student's approach towards communication skills which form the mainstay of doctor patient relationship by assessing the leaning of medical students, who are the future physicians, towards either a doctor-centered or a patient-centered behavior and also to explore the effects of personal attributes on care based on gender and academic year.

Two main objectives of our study are 1.To assess the attitude of students belonging to different professional year towards doctor-patient communication. 2. To assess the impact of the AT-COM

module (new curriculum introduced) and compare the outcome using Patient-Practitioner Orientation Scale (PPOS) among medical students from different professional year.

MATERIALS AND METHODS

STUDY DESIGN AND SAMPLING: A Descriptive,Cross sectional study was conducted between May and June 2017at Tagore medical college and hospital, Rathinamangalam, Chennai, India.The study population consisted of 200 medical students studying at Tagore Medical College and Hospital, belonging to different professional years. The students were selected from each professional year randomly using simple random sampling method (lottery method). Totally there are four batches of 150 students from different professional years, of which 50 from each batch were randomly selected, which reached out to 200 students. Out of the four professional years only the first clinical year medical students were exposed to Attitude and Communication (AT-COM) skill training during their clinical posting in the department of community medicine whereas the other batches weren't exposed to this AT-COM module training. The purpose and details of the study were clearly explained to the study participants before they are enrolled for the study ensuring confidentiality. The students who were willing to participate in the study were included for the study after getting the written informed consent. After getting the written permission from the Head of the institute and the concerned Department Heads, the study participants were personally interviewed using a standardized and validated 18 item questionnaire measuring the attitude towards doctor patient communication.

STUDY TOOL: Students' attitude towards patient-doctor relationship was studied using the previously validated Patient-Practitioner Orientation Scale (PPOS) after getting the consent from the developer, Dr. Edward Krupat. PPOS measures students' attitude towards the sharing and caring dimensions of the doctor-patient relationship by noting the respondents' degree of agreement with various statements using a Likert-type scale.[15] The tool consists of total 18 questions that measures the beliefs of patients and doctors along a 6-point scale ranging from doctor or disease centered (score of 1) to patient or family centered (score of 6). The scale also measures 2 dimensions, caring and sharing.The reliability and validity of the scale to assess self-perceived centeredness in patients, medical students, and primary care doctors have been assessed in several studies reported in the literature.[17-19]

OUTCOME MEASURE AND STATISTICAL METHOD: The collected data were entered in the MS excel sheet and the analysis was done using SPSS software version 20. The outcomes were expressed in mean values and were interpreted either as Doctor centered or Patient centered attitude. Unpaired t test, "ANOVA" test followed by "TukeysHonestly Significant Difference (HSD) Post Hoc" test were performed to test the hypothesis.

ETHICAL CONCERNS: As this study is a cross sectional descriptive study using a questionnaire and does not involve any kind of interventions, there are no ethical issues for the smooth conduction of the study.

RESULTS

50 Students from each academic year first to fourth professional years participated in this study with the final total of 200 students. There were a total of 97 (48.5%) males and 103 (51.5%) female students.

Mean PPOS score of the entire sample was 3.36 (± .53 S.D.). The mean PPOS score for Second professional year who were exposed to the AT-COM module was 4.00 (±0.59) with more patient centered behavior. We found that the mean PPOS scores for the final year evidently went down (with mean 2.98 and ±0.62 SD) when compared to the mean score of the exposed group i.e. Second year. Mean sharing sub-scale score for the entire sample was 3.24 (± 0.57 S.D.). Sharing sub-scores, measuring beliefs about power and information between the doctor and patient, were significantly more patient-centered for Second year students (Mean 4.06) than the final year students (Mean 2.61).Caring sub-scores for the total sample was 3.47 (± 0.31 S.D) which measures the beliefs about tending to patient's emotions and lifestyle,did not change much with the different professional years.In general, Caring scores were considerably higher than Sharing scores. (Table 1)

A one-way between subjects ANOVA (Table 2) was conducted to compare the effect of students (2nd year) who were exposed to the new curriculum (AT-COM module) against the other year students who weren't exposed to the new curriculum. There was a significant effect on students who were exposed to the new curriculum at the p<.05 level for the conditions [F= 34.096, *P* = 0.000].

Since we found a statistically significant result, we needed to compute a post hoc test. We selected the Tukey post hoc test. This test is designed to compare each of our conditions to every other condition. This test will compare the students who were exposed to the new curriculum and those who weren't exposed to the same. Post hoc comparisons using the TukeyHonestly Significant Difference test (Table 3 and 4) indicated that the mean score for the Second year students (Mean: 4.00, S.D: ±0.59) who were exposed to the new curriculum was significantly different than the other professional years.

Also one-way between subjects ANOVA (Table 5, 6) was conducted to compare the effect of sharing and caring attitude between students who were exposed to the new curriculum (AT-COM module) against the other year students who weren't exposed to the new curriculum. There was a significant effect on both the sharing and caring attitude at the *P* <.05 level for theconditions [F= 63.4111, *P* = 0.000] for sharing sub score and [F = 18.037, *P*= 0.000] for caring sub score.

Unpaired t-test was conducted to compare the PPOS scores between male and female genders. There was highly significant difference in the PPOS scores for Female (M=4.013, SD=±0.264) and Male (M= 3.390, SD= ±0.539) with *P* <0.001.These results suggest that females do have more patient centered behavior when compared with the male counterpart.

DISCUSSION

This study gives positive evidence and emphasis on training in the field of communication for students to inculcate attitudes toward patient-centered care.The final year students showed a degradation of attitude towards patient care when compared to the students who were exposed to attitude and communication training who showed patient centered attitude. Results similar to our findings with waning patient centered behavior as students approach the final year was seen in the work of Haidet et al. [20] A study in Nepal [21]also showed that earlier year of medical school and female were significantly associated with patient-centered attitudes . Female gender was associated with more patient centered behavior in our study and also this finding coincided with many other similar studies conducted.[22]

Our results are contradicting with the findings in Pakistan by Ahmad and colleagues' where most patient-centered attitudes were seen in 4th academic year and doctor-centered attitudes were seen in 2nd academic year.[23]A similar study in Korea[24] correlates with our study in one aspect where the PPOS score was higher in female than male but final year students also showed more of patient centered behavior which was contrasting with our study results. In Brazil, sharing domain scores showed that as students go into higher academic years, become more aware about the patients' rights and are more willing to share the power with them.[9]The caring domain shows the same pattern as the total PPOS score which coincides with the study conducted in Pakistan. [25]Doctor centered attitude in medical students is associated with decreased patient satisfaction[18]

in many of the countries where this study has been conducted. These finding clearly divide our sample into the ones who just see the disease while the others whoget to know them and see them as a whole person. This difference may be due to many factors. One factor is stress. Stress is highly prevalent among medical students.[26] A study in Orissaalso showed that more than half of the medical undergraduate students were affected by depression, anxiety and stress.[27] It is common among final year students and was associated with reduced patient care practices.[27,28]

Another reason for medical students to be more doctor-centered may be due to the teaching style of the practicing doctors who teach them. It is found that doctors in the government-owned hospitals did not take consent from more than 90% patients, and right of the patient to informational privacy was less than 11%[29] Similar studies in Pakistan also showed that doctors didn't take consent from their patients. [30]Such practice may prevent the patients from being transparent and telling their complete history and symptoms. [31]When medical students are taught in such a doctor-centered environment, it is natural for them to follow such practices.

Our study suggests that emphasis on a patient-centered curriculum, and its teachings are required for producing the results. Also consistent with Krupat and colleagues' findings,[32] the results of our study suggest that an innovative curriculum can indeed halt the progressive decline in patient-centered beliefs among third-year medical students. Also Ross, Elizabeth Fromm et al.[33] showed statistically significant differences in student attitudes toward patient-centered care after the educational intervention. It would be more fruitful to the patients if the medical students are taught to focus on patient and interact with them at an early stage in their medical curriculum.

CONCLUSION

To conclude, a medical graduate must function as a clinician, communicator, lifelong learner and a professional. In order to fulfill these he must obtain a set of competencies at the time of graduation**.** Hencemedical school curricula should contain courses aimed toward communication, and also specific interventions aimed at attitudes as well as skills where patient-centered attitudes may be fostered among the students who are going to be future doctors. Change in the attitude of medical students towards patient-centered care is possible with educational intervention. If a doctor treats the disease alone he may or may not be successful, but if he treats the person and the disease then he would surely succeed with the treatment.

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DECLARATION OF INTEREST

There are no conflicts of interest in this work.

Table 1: Mean PPOS, Sharing and Caring sub scale scores for different professional years.

Year of study	Mean PPOS score	Mean Sharing sub score	Mean Caring sub score
First	3.317 (±0.59 S.D)	3.244 (±0.53 S.D)	3.594(±0.476 S.D)
Second	4.006 (±0.59 S.D)	4..066 (±0.66 S.D)	3.870 (±0.52 S.D)
Third	3.135 (±0.31 S.D)	3.034 (±0.30 S.D)	3.237 (±0.31 S.D)
Final	2.981 (±0.62 S.D)	2.617 (±0.50 S.D)	3.217 (±0.70 S.D)
Total	3.360(±0.53 S.D)	3.240 (± 0.57 S.D)	3.479(±0.310 S.D)

Table 2: ANOVA Test for the Mean PPOS scores

	Sum of squares	df	Mean Square	F	P
Between	30.695	3	10.232	34.096	0.000
Within	58.816	196	0.300		
Total	89.512	199			

Table 3: Tukey Post Hoc Test for the Mean PPOS scores

	First Year	Second Year (Exposed group)	Third Year	Final Year
Mean	3.317	4.006	3.135	2.981
Number of measures per sample : 50				
MeanSquare$_{error}$=0.3				
Df$_{error}$=196				

Table 4: Pair-Wise Comparisons via Tukey HSD Test

HSD$_{0.5}$=0.28			
HSD$_{0.1}$=0.35			
	Second year	**Third year**	**Final year**
First year	*P*<.01	Not significant	*P*<.05
Second year		*P*<.01	*P*<.01
Third year		Not significant	

Table 5: ANOVA Test for the Mean Sharing sub scores

	Sum of squares	df	Mean Square	F	P
Between	55.646	3	18.549	63.411	0.000
Within	57.333	196	0.293		
Total	112.980	199			

Table 6: ANOVA Test for the Mean caring sub scores

	Sm of squares	df	Mean square	F	P
Between	14.665	3	4.888	18.037	0.000
Within	53.122	196	0.271		
Total	6.787	199			

Table 7: Unpaired 'T' Test for Male Vs Female PPOS scores

Group	Male	Female	P value
Mean	3.390	4.013	<0.0001
Standard Deviation	0.539	0.264	
Standard Error ofMean	0.054	0.026	
N	97	103	

REFERENCES

[1] Tongue J.R., Epps H.R., Forese L.L. Communication skills for patient-centered care: research-based, easily learned techniques for medical interviews that benefit orthopaedic surgeons and their patients. J Bone Joint Surg Am. 2005;87:652–658
[2] Teutsch C. Patient-doctor communication. The Medical Clinics of North America. 2003;87(5):1115–1145.
[3] Lipkin M Jr, Putnam SM, Lazare A, editors. The Medical Interview: Clinical Care, Education, and Research. New York, NY: Springer-Verlag; 1995.
[4] Hu W, Song Y, Zhong X, Feng J, Wang P, Huang C. Improving doctor–patient communication: content validity examination of a novel urinary system-simulating physical model. Patient preference and adherence. 2016;10:2519-2529.
[5] Roter DL, Hall JA. Doctors Talking to Patients/Patients Talking to doctors. Westport, Conn: Auburn House; 1993.
[6] Chin JJ. Doctor-patient relationship: a covenant of trust. Singapore Med J. 2001; 42: 579-81.
[7] Tor PC. New challenges facing the doctor-patient relationship in the next millennium. Singapore Med J. 2001; 42: 572-5
[8] Duvivier RJ, Boulet JR, Opalek A, Zanten M, Norcini J. Overview of the world's medical schools: an update. Med Educ. 2014;48:860–9. doi: 10.1111/medu.12499.
[9] Ribeiro MM, Krupat E, Amaral C. Brazilian medical students' attitudes toward patient-centered care. Med Teach. 2007;29:1–5.
[10] Woloschuk W, Harasym PH, Temple W. Attitude change during medical school: A cohort study. Med Educ. 2004;38:522–534.
[11] Hojat M, Mangione S, Nasca TJ, et al. An empirical study of decline in empathy in medical school. Med Educ. 2004;38:934–941.
[12] Coulehan J, Williams P. Vanquishing virtue: The impact of medical education. Acad Med. 2001;76:598–605.
[13] Pololi L, Price J. Validation and use of an instrument to measure the learning environment as perceived by medical students. Teach Learn Med. 2000;12:201–207.
[14] Wolf TM, Balson PM, Faucett JM, Randall M. A retrospective study of attitude change during medical school. Med Educ. 1989;23:19–23.
[15] Shankar P, Dwivedi N, Bhandary S, Majhi S, Varela L, Nandy A. Basic Science Medical

Student Attitudes toward the Patient-Doctor Relationship, MedEdPublish, 2016, 5, [3], 79,
[16] Reforms in undergraduate and postgraduate medical education, Vision 2015. (Pdf on the Internet) (Cited 18 July 2017) available from https://www.tnmgrmu.ac.in/images/medical-council-of-india/MCI_book.pdf
[17] Krupat E, Rosenkranz SL, Yeager CM, Barnard K, Putnam SM, Inui TS. The practice orientations of physicians and patients: the effect of doctor-patient congruence on satisfaction. PatientEducCouns. 2000;39(1):49–59.
[18] Krupat E, Hiam CM, Fleming MZ, Freeman P. Patient-centeredness and its correlates among first year medical students. Int J Psychiatry Med. 1999;29(3):347–356.
[19] Haidet P , Dains JE , Paterniti DA , Chang T , Tseng E , Rogers JC. Medical students' attitudes toward patient-centered care and standardized patients' perceptions of humanism: a link between attitudes and outcomes. Acad Med.2001; 76 (10suppl):S42–S44.
[20] Haidet P, Dains JE, Paterniti DA, et al. Medical student attitudes toward the doctor patient relationship. Med Educ 2002;36:568- 74.
[21] Shankar PR, Dubey AK, Subish P, Deshpane VY. Attitudes of first year medical students towards the doctor–patient relationship. J Nepal Med Assoc. 2006;45:196–203
[22] Wahlqvist M, Gunnarsson RK, Dahlgren G, Nordgren S. Patient-centred attitudes among medical students: gender and work experience in health care make a difference. Med Teacher. 2010;32(4):e191–8.
[23] Ahmad W, Krupat E, Asma Y, et al. Attitudes of medical students in Lahore, Pakistan towards the doctor–patient relationship. Sambunjak D, ed. PeerJ. 2015;3:e1050. doi:10.7717/peerj.1050.
[24] Park J. Medical students' attitudes toward the patient-doctor relationship. Korean J Med Educ 2007; 19: 215-223.
[25] Ahmad W, Krupat E, Asma Y, et al. Attitudes of medical students in Lahore, Pakistan towards the doctor–patient relationship. Sambunjak D, ed. PeerJ. 2015;3:e1050. doi:10.7717/peerj.1050.
[26] Gade S, Chari S, Gupta M. Perceived stress among medical students: To identify its sources and coping strategies. Arch Med Health Sci 2014;2:80-6 .
[27] Waqas e Iqbal S, Gupta S, Venkatarao E. Stress, anxiety & depression among medical undergraduate students & their socio-demographic correlates. The Indian Journal of Medical Research. 2015;141(3):354-357.t al., 2015.
[28] Shanafelt TD, Bradley KA, Wipf JE, Back AL. Burnout and self-reported patient care in an internal medicine residency program. Ann Intern Med 2002; 136:358-67.
[29] Humayun A, Fatima N, Naqqash S, et al. Patients' perception and actual practice of informed consent, privacy and confidentiality in general medical outpatient departments of two tertiary care hospitals of Lahore. BMC Medical Ethics. 2008;9:14. doi:10.1186/1472-6939-9-14.
[30] Imam SZ, Syed SK. Patients' satisfaction and opinions of their experiences during admission in a tertiary care hospital in Pakistan – a cross sectional study. BMC Health Services Research. 2007, 7: 161-10.1186/1472-6963-7-161.
[31] Shrier I, Green S, Solin J. Knowledge of and attitude toward patient confidentiality within three family medicine teaching units. Acad Med. 1998, 73: 710-12. 10.1097/00001888-199806000-00021.
[32] Krupat E, Pelletier S, Alexander EK, Hirsh D, Ogur B, Schwartzstein R. Can changes in the principal clinical year prevent the erosion of students' patient-centered beliefs? Acad Med 2009;84(5):582-6.
[33] Ross EF, Haidet P. Attitudes of physical therapy students toward patient centered care, before and after a course in psychosocial aspects of care. Patient EducCouns. 2011;85(3):529–532.