

Faculty Members' Role in Establishing Direct Communication with Students to Improve Interactive Learning at Undergraduate Level: Medical Students' Perceptions

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ABSTRACT

The importance of communication by faculty member while teaching undergraduates cannot be overemphasized however its impact upon students is not well known.

This study aims to assess medical students' perception regarding teacher's contribution in direct communication if interactive learning is to be improved; and to compare responses of phase II (preclinical) and phase III (clinical) medical students.

METHODOLOGY: This cross sectional study was conducted from November 2016 to February 2017. Ethical permission was taken from the institutional research board. Investigators developed a questionnaire after a detailed literature review. Pilot study was conducted to increase the clarity of items. Responses were obtained and were analyzed statistically to get the overall medical students' perception.

RESULTS: Overall response rate was 82% (197 of 238). The role of teachers in direct verbal communication to improve learning was largely appreciated by the students. High mean score was found in the area of establishing effective channels of communication with all concerned ($x=3.81$) that reflect the positive role of teacher in the area of effective communication. Similarly students appreciated the good listening skills ($x=3.51$), and believe in providing fair chance of participation ($x= 3.55$). In comparison with Phase II and Phase III students, no significant difference among two groups was reported ($t= -2.88$, $p = > 0.05$).

CONCLUSIONS: Majority of the students rated the role of faculty members as positive. Their mean perception score was above the average range. As result showed the positive responses of the students on the role of teachers in communication and learning, more emphasis on communication in interactive learning in medicine should be exercised.

KEY WORDS: Communication, Interactive learning, Medical education

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INTRODUCTION

Currently, the medical educators are debating upon poor communication skills and professionalism among the medical graduates. Consequently many institutes, to promote learning, are critically reviving methods of teaching and learning strategies and the role of the clinical educator in behavioral and skill development of medical students¹⁻⁴. Although, it must be privilege and obligation of all the medical professionals to impart learning to future generations of physicians; however only few are more respectful and trustworthy, admired and perceived as professionals⁵ and are being modeled by the physician and trainee⁶.

Published literature showed that role modeling is an important aspect in the development of behaviour.⁷ Poor role modeling of the teacher has been pointed out by majority of the medical students

and junior physicians⁸.

In any higher learning institute, teaching department is also an administrative unit; effective communication between head of the department and teachers develops healthy conducive learning environment and enhances job satisfaction that may reflect positively while teaching medical students⁹. It has been recognized that positive outcomes can be achieved more importantly with the positive communication relationship of teacher and student^{9,10}. Generally, medical colleges cannot ignore the prominent role that communication of faculty plays in the academic institutions of an educational environment, but also in the advancement of medical students' performance⁹. This is an area where most of the training institutions are lacking¹⁰. Conversely there is a knowledge gap regarding the clinical educators' role in clinical

teaching, instructional methods and direct verbal communication with medical students in many countries including Arab countries¹¹.

Direct communication is a linkage between faculty members and students. The direct verbal communication in the present context is defined as "a verbal communication between teacher and student on different aspect of learning and teaching for the promotion of interactive learning". The teacher ensures that the message is clearly conveyed and understood by the student. Additionally, teacher frequently and openly communicates with students to provide and receive information in a supportive and effective manner.

Several ways of verbal communication such as arranging formal or informal, individual or group sessions to provide feedback on students' performance improves interactive learning process; shared information received from higher administration can also be used by the teachers. Significant aspect of communication is providing frequent constructive feedback to students from teachers with a purpose to promote learning and behavior change¹². The use of various methods and ways may improve performance, professionalism and commitment of students. Most importantly through direct communication, trust can be developed between the teachers and the students⁹.

Authors did not find literature that explored the role of teachers as communicator with reference to Saudi Arabia particularly in medical education. Mechanism of direct teacher-student interaction to receive and share information to improve learning is not even established in any institution to the best of authors' knowledge. This urges researchers to assess the involvement of Saudi medical teachers in direct verbal communication at undergraduate level. The responses of students may help in understanding the skills and techniques that needs to change the teaching approach and therefore may help in the organization of faculty development program on different aspects of communication. The primary purpose of this study is to assess the faculty members' role in establishing direct communication with students to improve interactive learning as perceived by medical students at College of Medicine, King Saud bin Abdul Aziz University of Health Sciences (COM, KSAU-HS), Riyadh, Saudi Arabia. We also compare perception of phase II (preclinical) and phase III (clinical) students on the role of the teacher in establishing communication with the students.

METHODOLOGY

This cross sectional survey was conducted from November 2016 to February 2017 in the College of Medicine, KSAU-HS, Riyadh, Saudi Arabia, having

three campuses offering undergraduate and postgraduate programs in medicine. The Riyadh campus has two separate branches for male and female students. The integrated curriculum is taught by the basic sciences and clinical faculty through problem-based learning format in small groups setting throughout the study years. All faculty members; full time and part time appointees are expected to work as Program Based Learning (PBL) facilitator, resource provider and assessor. Full time faculty members for male section are 45 and 25 for female section. While for both male and female section 120 part time faculty members are available. Phase I, in College of Medicines, is a two year pre-professional program for all the students of medicine and health professions. Phase II consists of preclinical years, where students learn clinical skills on simulated patients and Phase III consists of clinical years where students are expected to observe and learn skills on real patients in their respective clinical departments. In this study the male and female medical students in their phase II and III, in COM, KSAU-HS, Riyadh were included. Ethical approval was taken from Institutional Review Board from King Abdul Aziz International Medical Research Centre (KAIMRC).

Sample size was calculated by using the Raosoft®¹³. The sample size was estimated at the 95% confidence level with an estimated 50% response distribution and a margin of error of 5% adding additional 50% for non-response/no-availability rate. This turn out to be 238 students. Purposive sampling technique was used in which medical students who agreed to participate in the study were enrolled. A questionnaire consisted of 32 items, focusing upon the communicative behaviors of faculty members, on 5 Likert-type items from 5 to 1 for always to never was constructed. This self-administered questionnaire was pre-tested by conducting a pilot study on a group of students (n=20) to increase its accuracy. After pilot study 5 ambiguous items were deleted and 3 items were rephrased. The data of pilot study was not included in the final study. To determine the internal consistency of the questionnaire, Cronbach's alpha was calculated. The Cronbach alpha for this questionnaire is 0.77. The questionnaire was administered by the co-investigator to the students after taking written consent in their respective classes. Participants were informed that all the information will be kept confidential and data will be used anonymously only for research purpose. After data collection, responses were entered and analyzed using Statistical Package for Social Sciences (SPSS; Version 20). Continuous data e.g. age was expressed as mean and standard deviation. Categorical variables e.g. gender and responses on five point Likert scale were expressed in frequencies and

percentages. To test the difference of responses between the Phase II and Phase III students, two-sample t-test was used. Categorization of mean scores was done and distributed into three main categories such as mean score below 2.49 was considered below average; scores between 2.50 to 3.49 were counted as average and mean scores of 3.50 - 5.00 was computed as high average. Enueme CP & Egwunyenga EJ¹⁴ distribution of mean scores was taken as reference.

RESULTS

The purpose of this study was to determine the perception of medical students on the active role of teachers in direct communication and promotion of interactive learning at undergraduate level. The response rate was 82% (197 out 238 students). Out of 197 students, 126 (64%) were from Phase III; while others 71 (36%) were from Phase II. The demographic profile of the respondents is described in Table I. To assess the perception, mean and t-test were employed. Table I shows descriptive analysis of the respondents. The total sample was 197 undergraduate medical students. Among them 54% (n=106) were female and 46% (n=91) were male. The respondents' ages ranged from 20 to 32, with an average age of 23 years. Table II-A and II-B illustrates the mean scores of perception of students that is on above and average mean category (2.50-3.50), showing the positive aspects of faculty members' communication in pre-clinical and clinical years. Majority (91%) of the students rated their faculty members' communication as average (57%) and above average (34%). Regarding first objective on different items of direct communication, students opinioned that teachers have established an effective channel with all

concerned ($x=3.81$), are good listener ($x=3.51$), provide conducive environment for communication ($x=3.43$), provide related information ($x=3.52$), listen personal problems that hinders in learning ($x=3.44$), exchange views with counterparts about the promotion of educational activities ($x=3.41$) and encourage communication ($x=3.43$).

Table III demonstrates the significant difference in the perception of Phase II and Phase III about faculty members' role in direct verbal communication. Statistically no significant difference ($p= 0.77 > \alpha= 0.05$) between the opinions of students from both levels regarding faculty role in the advancement of interactive learning is recognized. It shows that students from both pre-clinical and clinical years have similar perception about their faculty member with regard to role of direct communication in promotion of interactive learning. Although the result was insignificant but overall perception of both groups acknowledges positive role of faculty members in the direct communication at the undergraduate level.

**TABLE I:
DEMOGRAPHIC PROFILE OF STUDENTS**

Variables	N	Mean \pm Std. Dev
Age	197	23.6 \pm 2.82
Student Batches	n	%
Batch 12	71	36
Batch 11	54	27
Batch 10	72	37
Gender		
Male	106	54
Female	91	46

TABLE II-A: STUDENTS' VIEWS REGARDING FACULTY MEMBERS' ROLE IN THE ADVANCEMENT OF COMMUNICATION

Items	Always		Frequently		Occasionally		Seldom		Never		Mean
	n	%	n	%	n	%	n	%	n	%	
Feedback session	43	21.8	44	22.3	39	19.8	39	19.8	32	16.2	3.14
Information related to issue	45	22.8	58	29.4	45	22.8	15	7.6	34	17.3	3.33
Effort to provide favorable environment	46	23.4	59	29.9	43	21.8	31	15.7	18	9.1	3.43
Provide information regarding rules and regulations	46	23.4	75	38.1	32	16.2	23	11.7	21	10.7	3.52
Discuss relevant policies	34	17.3	67	34.0	54	27.4	28	14.2	14	7.1	3.40
Update students about the decisions of head	39	19.8	36	18.3	61	31.0	22	11.2	39	19.8	3.07
Share related information	52	26.4	36	18.3	70	35.5	26	13.2	13	6.6	3.45
Provide opportunity to discuss various issues	34	17.3	59	29.9	59	29.9	25	12.7	20	10.2	3.31
Seek views of the students	32	16.2	54	27.4	53	26.9	35	17.8	23	11.7	3.19

Faculty Members' Role in Establishing Direct Communication

Discussion with students	42	21.3	53	26.9	42	21.3	31	15.7	29	14.7	3.24
Encourage communication among students	54	27.4	47	23.9	44	22.3	34	17.3	18	9.1	3.43
Keep channels of communication open	32	16.2	46	23.4	65	33.0	36	18.3	18	9.1	3.19
Use both formal and informal ways of communication	34	17.3	52	26.4	62	31.5	30	15.2	19	9.6	3.26
Establishing effective channels of communication with all concerned	76	38.6	47	23.9	46	23.4	16	8.1	12	6.1	3.81
Good listener	51	25.9	47	23.9	57	28.9	36	18.3	6	3.0	3.51
Invite all concerned for feedback	34	17.3	65	33.0	25	12.7	36	18.3	37	18.8	3.12
Open to listen personal problems	49	24.9	43	21.8	61	31.0	34	17.3	10	5.1	3.44
Hesitate to initiate dialogues with his/her students	11	5.6	56	28.4	71	36.0	41	20.8	18	9.1	3.01
Conceal information	34	17.3	52	26.4	42	21.3	38	19.3	31	15.7	3.10
Participation of students in academic plans	46	23.4	43	21.8	48	24.4	32	16.2	28	14.2	3.24
Convey suggestions to high ups	37	18.8	42	21.3	60	30.5	28	14.2	30	15.2	3.14
Keep authorities informed of students' performance	35	17.8	46	23.4	57	28.9	37	18.8	22	11.2	3.18
Exchange views with counterparts about the promotion of educational activities	52	26.4	43	21.8	53	26.9	31	15.7	18	9.1	3.41
Let to seek information from every source	23	11.7	65	33.0	46	23.4	36	18.3	27	13.7	3.11
Believe in open discussion	36	18.3	64	32.5	42	21.3	32	16.2	23	11.7	3.29
Don't mind personal discussions	36	18.3	45	22.8	61	31.0	41	20.8	14	7.1	3.24
Believe in providing fair chance of participation	42	21.3	65	33.0	57	28.9	25	12.7	8	4.1	3.55

TABLE II-B: STUDENTS' VIEWS REGARDING FACULTY MEMBERS' ROLE IN THE PROMOTION OF COMMUNICATION

Mean scores	Overall Response		Phase II (Pre-Clinical)		Phase III (Clinical)	
	n	%	n	%	n	%
Below average	19	10	6	8	13	10
Average	112	57	43	61	69	55
Above average	66	34	22	31	44	35
Total	197	100	71	100	126	100

TABLE III: T-TEST SHOWS THE COMPARISON BETWEEN THE VIEWS OF BASIC AND CLINICAL SCIENCES STUDENTS ABOUT FACULTY MEMBERS' ROLE IN THE ADVANCEMENT OF COMMUNICATION

Mean score	n	Mean ± Std. Dev	t- value	p-value
Phase II (Pre-Clinical)	71	3.3 ± .58	-.28	0.77*
Phase II (Clinical)	126	3.3 ± .67		
<i>*insignificant at <0.05</i>				

DISCUSSION

The role of faculty member was positively perceived by the students on all items related to communication. The average and above average mean scores on most of the items reflect the pivotal role of faculty members' communication during pre-clinical and clinical years. The above average mean scores of 3.5 in items on providing information regarding rules and regulations, good listening ability and believe in providing fair chance of participation, and teachers support in terms of providing relevant information and feedback indicate a significant role of teachers in establishing ways of communication with students for the advancement of interactive learning. One study to

assess the learner's perspective on communication in pediatric intensive care identified that only 50% of the students were satisfied with communication in education and rated it as very good.¹⁵ On the other, a study reported that medical students put more emphasis on the charismatic personality of the teacher and suggested further studies on effective teaching and strategies of effective teaching¹⁶.

Although, communication skills are a challenge for faculty members in medicine, teaching and using effective communication skills into practice is a need of the time which can be achieved through frequent teacher- learner's meeting.

In this study the average mean scores on other items reveals that faculty members emphasize on creating a favorable environment for students' learning during and after the class to increase students' motivation and their interest in learning. Moreover, students' satisfaction with faculty members on sharing of information related to learning was positively perceived. Students confirm that faculty members discuss about all the official matters concerned with students which have an impact on student's satisfaction with the work and its environment. Almost identical results has previously been reported that feedback on patient-student interaction and hospital related matters may improve student's job performance and professionalism^{10,17}.

In addition, the finding predicted a greater role of direct communication in learning because it entails achievement, self-motivation, understanding of personal issues and proper academic planning and proper appraisal^{17,18}. This is acknowledged by the students in this study and pointed out the teacher's interest in personal and professional matters of student to promote interactive learning and performance.

Further, when the perception of learner from Phase II and Phase III was compared, no significant difference at undergraduate medical education on the aspect of direct interaction with students was found. This insignificant result proves the crucial contribution of direct communication of teachers with students in interactive learning at all level of study as perceived by both groups. As most of the teachers conduct sessions in an integrated curriculum at the college in both Phase II and III, this insignificant result indicates that they are using similar ways of communication with students in their teaching with an intention to improve learning.

CONCLUSION & RECOMMENDATION

It is concluded that the role of faculty members in direct communication with students in the advancement of learning is perceived effective at

undergraduate level. However the sample size and the response rate were very low for this study it is therefore recommended that a multicenter larger study should be conducted including both male and female students. To prepare medical students for professional life, it is recommended that formal communication sessions between teacher and student should be included in the undergraduate activities.

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