

### The Effect of Teaching Patient-Physician Communication on the Competency of Undergraduate Medical Students

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**Background:** Patient-physician communication skill is one of the basic competencies needed for health care professionals and so is a basic part of medical core curriculum. Communication skills have been increasingly paid attention in medical education. This study was designed to evaluate the effect of teaching patient-physician communication skills on the competency of undergraduate medical students.

**Methods:** A field trial on 68 undergraduate medical students with random allocation to case and control groups was carried out. Teaching communications skills were performed through role modeling in the control group. The same method along with workshops on communication skills were performed for the case group. Two sessions of communication skills' workshop performed one month apart the Competency of all 68 students was examined by observation of their interview with simulated patients (SPs) through an objective structured clinical examination (OSCE) at the end of the 3rd month. Three stations examined communication skills using Calgary-Cambridge guide, modified ALOS global and patient physician relationship questionnaires distributed by ABMS and assessed the examinees through observation by professionals. Each station was ranked from 0 to 10. Data were analyzed by SPSS-11.5 software.

**Results:** Students in case group obtained higher scores in communication skills but the difference was not statistically significant. However active listening ( $p=0.01$ ) and patient-physicians communication skills ( $p=0.009$ ) mean scores were significantly higher in Control group.

**Conclusion:** It is likely that social interaction treats of internal validity has occurred. Diffusion of training material and Compensatory rivalry could have probably happened.

**Keywords:** Communication Skills; Patient Physical Communication; Undergraduate Medical Students

### تاثیر آموزش ارتباط پزشکی و بیمار بر مهارت ارتباطی دانشجویان پزشکی عمومی با بیماران

**زمینه و هدف:** علیرغم تاکید فراوان بر مهارت‌های ارتباطی، آموزش آن در بالین به صورت مدون انجام نمی‌شود. این مطالعه به منظور بررسی تاثیر آموزش مهارت ارتباط با بیمار در دانشجویان پزشکی عمومی صورت گرفت.

**روش:** در یک پایلوت کارآزمایی در عرصه ۶۸ نفر از دانشجویان پزشکی عمومی دوره کارآموزی بخش داخلی به صورت غیر تصادفی بین دو مرکز آموزشی تقسیم شده و در گروه شاهد روش مرسوم آموزش و در گروه مورد، همان روش به همراه آموزش مهارت ارتباط با بیمار طی ۲ کارگاه در پایان ماه اول و دوم دوره کارآموزی صورت گرفت. در پایان ماه سوم عملکرد دانشجویان بوسیله مشاهده مضامین با بیمار نما در یک آزمون بالینی ساختارمند عینی (OSCE) سنجیده شد.

**یافته‌ها:** ۶۸ دانشجو ۴۸ درصد مونث با میانگین سنی ۲۳/۷ سال در مطالعه وارد شدند. میانگین نمره مهارت ارتباطی در گروه مورد ۸/۸۰ و گوش دادن فعال ۸/۶۲ و در گروه شاهد به ترتیب ۷/۸۹ و ۷/۸۹ بود. اختلاف بین نمرات از نظر آماری معنادار بود. (به ترتیب  $p=0.008$  و  $p=0.01$ ).

**نتیجه گیری:** آموزش مهارت‌های ارتباطی در دانشجویان پزشکی عمومی در افزایش مهارت آنان در این زمینه موثر است. آموزش این مهارت در ابتدای دوره بالینی و استمرار آن در طی این دوره به ویژه از طریق آموزش الگو توصیه می‌گردد.

**واژه های کلیدی:** مهارت های ارتباطی، گوش دادن فعال، ارتباط پزشکی و بیمار، دانشجویان پزشکی عمومی

### تأثیر تعلیم مهارت ارتباط الطبیب مع المرضی علی مستوى المهاره الإرتباطیه عند طلاب الطب العام مع المرضی

**التمهید و الهدف:** هناك توجه في التعلیم الطبی الی أسلوب التعلیم البینتی علی فریق عمل.

هذا الأسلوب یعطی المعلم رخصه الی تقسیم الطلاب فی الصف الراسی الی مجموعات صغیره فی المراكز العلمیه المزدحمه و فی السطوح العلمیه.

اتبنت الدراسات عدّة فوائد لهذا الأسلوب منریا: ادخال الطلاب بشکل فعال فی الدرس و مناقشه المطالب. رفع مستوى ایجاد روابط العلمیه بین الطلاب. ارتفاع مستوى العلامات و العاجه الی عدد اقل من الاساتذہ.

إن الیرف من اجراء هذه الدراره هو تعیین تأثیر اجراء أسلوب التعلیم البینتی علی فریق عمل فی مجال تعلم الوحدات الراسیه «أسلوب المطالعه و التعلیم» عند طلاب فرع التفریبه.

**الأسلوب:** إن افراد الدراره كانوا ۳۶ طالبا من طلاب السنه الاولى من فرع التفریبه.

فی المرحله التمهیدیه یطالع الطلاب الدرس المسمین قبل الدخول الی الصف و فی المرحله الثانيه ستستخدم استمارات یوجد فیها امثله من نفس البحت یتم الجواب علیها بشکل فردی اولاً و ثانیاً بشکل جماعی.

و فی المرحله الثالثه یتم توضیح بعض النقاط بشکل مطالب مختصره من قبل قائد المجموعه و اجراء مباحثه جماعیه. و فی النریایه تم اعطا الطلاب استماره تعیین مستوى رضا الطلاب من هذا الأسلوب.

**النتائج:** كان هناك اختلاف ذوقیه فی نتیجه بین الفریقین المشرکین فی هذه الدراره و كان هناك معدل علامات افضل بعد العمل من خلال فریق علی ( $p=0.05$ ) كانت نسبة الرضا عالیه جداً عند الطلاب تجاه اجراء هذا الأسلوب.

**النتیجه:** نستنتج أن الأسلوب المذكور یعطی اثرا کبیرا فی الاضراف التعلیمیة المتمحوره حول الطالب عند طلاب العلوم الطبیه.

**الكلمات الرئيسية:** التعلیم البینتی علی فریق عمل. طالب العلوم الطبیه.

### عام طب کے طلباء پر ڈاکٹر بیمار رابطے کی تعلیم کے اثرات کا جائزہ

**بیک گراؤنڈ:** علم طب میں ڈاکٹر اور بیمار کے رابطے کی مہارتوں پر بے حد تاکید کے باوجود کلینیکل سطح پر اس کی تعلیم نہیں دی جاتی۔ اس تحقیق میں عام طب کے طلباء پر ڈاکٹر بیمار کے رابطے کی تعلیم کے اثرات کا جائزہ لیا گیا ہے۔

**روش:** ایک ورک شاپ میں عام طب کے اے زسٹھ ڈاکٹروں نے جو طب داخلی میں انٹرن شب کر رہے تھے شرکت کی۔ ان ڈاکٹروں کو دو گروپوں میں تقسیم کیا گیا۔ ایک گروہ کو رول ماڈل کے ذریعے رابطے کی مہارتوں کی تعلیم دی گئی اور دوسرے گروہ کو رابطے کی مہارتوں کی تعلیم ورک شاپ میں دی گئی اور پہلے گروہ کے طریقے ہی استعمال کئے گئے۔ ایک مہینے کے بعد رابطے کی مہارتوں کی دو ورک شاپ کی گئیں۔ انٹرویو کے ذریعے دونوں گروپوں کی مہارت کا اندازہ لگایا گیا اس کے لئے بھی بیمار ماڈل استعمال کئے گئے۔ او ایس سی ای کے طریقے سے ترتیب دئے گئے سوالنامے سے بھی ان ڈاکٹروں کا امتحان لیا گیا۔ اسی ساتھ ساتھ کیلگری کیمبرج گائڈ اور سوالنامے استعمال کئے گئے۔ ڈاکٹروں کے جوابوں کا تجزیہ ایس پی ایس ایس سافٹ ویئر سے کیا گیا۔

**نتیجے:** اس تحقیق میں اے زسٹھ طلباء نے شرکت کی جن میں ایتالیس طالبات تھیں۔ دوسرے گروہ میں کیلگری کیمبرج گائڈ کے استعمال سے حاصل شدہ اوسط نمبر اسی اعشاریہ سات تھے اور بیمار کی باتوں کو بھر پور طرح سے سن کر عمل کرنے والوں کے نمبر نواسی اعشاریہ آٹھ تھے۔ اعداد و شمار کے لحاظ سے نمبروں میں معنی خیز فرق ہے۔

**سفارشات:** عام طب کے طلباء کو ڈاکٹر بیمار رابطے کی مہارتوں کی تعلیم سے ان کی طبی مہارتوں میں اضافہ ہوتا ہے۔ طبی تعلیم کی ابتداء میں اور ان مہارتوں کی تعلیم اور انہیں جاری رکھنے کی سفارش کی جاتی ہے۔ یہ تعلیم ماڈل بیمار کے ذریعے دی جائے۔

**کلیدی الفاظ:** رابطے کی مہارتیں، عام طب

## INTRODUCTION

Communication means conveying a defined message. Facing a patient and a family who are experiencing a physical and psychological crisis, this skill is of prime importance for the people working in the field of medicine. In nursing dictionary, communication is defined as an assurance band between the patient and those who are responsible for treatment (1). The existing relationship between the patient and the physician is naturally based on mutual trust and assurance. A professional physician trusts that his/ her patient reveals all the data about his/ her health problem. Mutually the patient also trusts the physician to represent a high level of abilities and expects him to keep his confidential information and not to abuse the unstable status of the patient.

In the recent decades, communication skills have been increasingly paid attention in medical education all around the world. In Iran the skills were considered in medical core curriculum approved by Ministry of health and medical education. However it is not efficiently taught in medical schools and is not used in practice very often. Many faculty members and students, although managing patients for long, but are not really aware of the skills. Tavakkol and colleagues in 1384 solar year reported that. There is a deep concern about the lack of communication skills within Iranian medical course planners. as medical students acquisition and use of communication skills is consistently poor (2). In a study carried out by Tefagh and colleges in Tehran, it was shown that 49.6% of the nurses acted incompetently, while communicating with patients and giving their medications (3). Frequent studies showed that good communication skills affects the patients' satisfaction. Larsen et al. observed that there is a direct relationship between the physician's non-verbal communication and the patients' satisfaction. In Iran in a survey in 12 hospitals, 15 clinics, and 41 private offices with 188 female and 214 male participant, it was revealed that the main request of the patients is honesty and respectful behavior of the physician and listening to their talks and explanation (4).

In Bangladesh, Aldana et al showed that only 55% of the patients experienced a private environment while getting visited by the physician and less than half of them (48.9%) had obtained enough explanations about their disease. All the patients (100%) expected to be treated politely and respectfully by their physician and in contrast a few patients expected high professional skills from the physician (5). Among patients who need more attention, like rural area patients, patients with chronic diseases and children communication becomes more important (6). Ogaldeh et al. studied the communicative status of patients and physicians in a rural area. They observed 119 medical interviews in a primary care clinics and then interviewed the patients in one week at home. It was concluded that the physicians had given very few advices about diet, hygiene and exercise. The main services provided included drug prescription and only 50% of the patients were able to remember the data about dose, intervals, or duration of their medication and in 20% of the prescriptions, the method of consumption of the drug was not notified (7). Kersh et al. recorded 800 visits of pediatric patients on a videotape. They studied mothers' satisfaction rate and

re-observed the interview films for examining the obstacles between the patient and physician. Sixty-eight percent of the mothers were satisfied with the interview and some of the obstacles included unfriendly behavior of the physician, lack of caring about parents' concerns, lack of giving clear explanations about the child's disease, and using medical terms (9). In Kandlin et al study the first expectation of the women from all cultures was to be considered as a human-being. Even if the quality of the services was not suitable, the relationship among the health personnel would compensate for that (10).

Rotter et al. taught patient-physician communication skills to two group of 45-people of medical students. Then they observed their interview with a simulated patient complaining chest pain and evaluated their competency. The group discovered ischemic heart attack and their diagnosis rate increased by using open-ended questions and summarizing them at the end of the interview.

As teaching patient-physician communication skills at the time of the study were limited to basic communication skills taught before entering the clinical period, we decided to examine the educational effect of holding the workshop when the medical students experience patient encounter.

The current study aimed to examine the effect of teaching patient-physician communication on the competency of undergraduate medical students in Mashhad university of medical science (11).

## METHODS

The present study was a field trial pilot study on 4<sup>th</sup> year medical students of Mashhad University, which was done during their 3-month externship period in internal medicine ward. Sixty-eight students were randomly divided into two groups. The control group teaching communication skill was taught by the usual method of role modeling. In the case group apart from this method, patient- physician communication skills were taught during two workshops held at the end of the first and second month of their three-month externship course. The educational methods included lecture, watching movies on right and wrong communications, role playing with a simulated patient, and group discussion. At the end of the third month the students' competency was evaluated by direct observation of their communication by simulated patients while taking a medical history or performing physical examination during objective structured clinical examination (OSCE).

In this exam three stations were allocated to observing the communication skills of the students. The questionnaires used for evaluating the communication skill of the students included Calgary-Cambridge Guide, modified ALOS global questionnaire, patient-physicians relationship questionnaire distributed by American Board of Internal Medicine (ABMS). Validity and reliability of questionnaires were confirmed using content validity method and Internal consistency ( $\alpha = 0.86$ ). In two separate stations two medical educationists observed the communication of the students with a simulated patients while taking medical history and performing physical examination and completed the Calgary-Cambridge Guide and modified

global questionnaire. In the third station a well-trained simulated patient along with playing the role of a patient, filled the patient-physicians relationship questionnaire distributed by American Board of Internal Medicine (ABMS). This patient simulated her role while answering the students' questions and filled down the questionnaires items in one minute time intervals considered between two stations. Each station was graded out of 10. One way analysis of variance and independent t-test were used to analyze the significant differences between mean scores of the two groups. The obtained scores of case and control groups were analyzed using SPSS 11.5. The significance level was considered as  $\alpha < 0.05$ .

**RESULTS**

Sixty-eight students (48% females) participated in the study. The average age of students was 23.7 yrs ( $\pm 1.3$ ) in the case and 23.5 ( $\pm 1.2$ ) in the control group.

Kolmogorov–Smirnov test of the two groups showed that variables in the two groups were distributed normally. One way analysis of variance and independent t-test showed that although the students in case group obtained higher scores in communication skills, the difference was not statistically significant. However active listening and patient-physicians communication skills mean scores were significantly higher in control group.

**DISCUSSION**

Asparangen and colleagues meta-analysis from best evidence medical education (BEME) shows that teaching

communication skills is essential to the curriculum of medical students, and can affect change performance of the students, but the appropriate time is not yet clear (12). Kim et al. in Indonesia held a 3-day workshop for teaching communication skills and repeated that until 16 weeks. They showed that this training is effective in the increase of the skill; however its long-term effect needs the skill to be reminded (13). The current study is one of the few intervening studies in the field of communication skills in our country.

However All students in both groups were classmates and it is highly likely that social interaction treats of internal validity has occurred. Diffusion of training material and compensatory rivalry could have probably happened. It seems that the behaviour in the control group has been altered as a result of the intervention done for the case group. They might have worked extra hard. However, this does not mean the workshops produced no effect. It is suggested to choose more different groups as case and control groups in the next studies.

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Table 1: Mean Scores of two groups of students in stations in OSCE exam(n=68)			
	Active listening Mean(SD)	Patient-Physicians relationship Mean(SD)	Communication skills Mean(SD)
Case group	8.6 (0.2)	8.8 (0.2)	11.74 (1.1)
Control group	7.9 (0.2)	7.9 (0.2)	12.77 (1.1)
Significance level	P=0.01	P=0.009	P=0.5

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