

Comparison of the medical students' self-assessment and simulated patients evaluation of students' communication skills in Family Medicine Objective Structured Clinical Examination (OSCE).

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Abstract

Objective: Comparison of the medical students' self-assessment and the evaluation of students by simulated patients regarding students' communication skills in Family Medicine OSCE.

Introduction: Communication is the act of conveying a message to another person, and it is an essential skill for establishing physician-patient relationships and effective functioning among health care professionals. Effective communication can positively influence patient satisfaction and outcomes. Health professional communication skills do not necessarily improve over time but can improve with formal communication skills training.

Method: A cross sectional study done at Oman Medical College. All of the medical students who signed up for an Objective Structured Clinical Examination (OSCE) in Family Medicine were included. As a part of the OSCE, the student performance was evaluated by a simulated patient. After the examination, the students were asked to assess their communication skills. The Calgary Cambridge Observation Guide formed the basis for the outcome measures used in the questionnaires. A total of 12 items were rated on a Likert scale from 1-5 (strongly disagree to strongly agree).

Results: 68 students participated in the examination, 88% (60/68) of whom responded to the questionnaire. The response rate for the simulated patients was 100%. Over all comparison showed that students marginally over estimated in few areas as compared to simulated patients. Measures of reliability show that it is a reliable measure with Cronbach's Alpha from the 12 items being 0.89. When comparing between the experience and new simulators only one item (q12) showed a statistically significant difference, with $t(16)=3.08$, $p<0.05$, with experienced simulators giving a higher score 4.55, when compared with the new simulators 3.86.

Conclusion: Students' and simulated patients' assessment has some agreements. Self-assessment is guiding the future learning, providing reassurance, and promoting reflection which helps them to perform appropriately.

Key words: Self-assessment, communication skills, Calgary Cambridge observation guide; Communication skills training, under graduate medical student

Background

Communication skills' training is an essential component of medical education. Communication is a process by which meaning is conveyed to create shared understanding[1]. It is a skill that can be taught and learnt; students learn this competency in an effective learning environment. It is an essential skill for safe, effective, and compassionate health care to improve better outcomes in health care system and good communication skills are more likely to make patients satisfied with the care they receive[2]. Learners are expected to be actively involved and coached in communication by their teachers specially the features of clinical competence like empathy, compassion, counseling, and showing support to patients[3-4]. The most difficult aspect of the doctor-patient relationship is ability to convey distressing news to the patients and their relatives. Breaking bad news is an inevitable part of medical practice[5-7]. The development of effective communication skills is an important part of becoming a good doctor; with appropriate teaching, these skills can be both acquired and retained[8]. Integrating communication with other clinical skills- with history taking, physical examination, and medical problem solving, help them in real-life practice[9-10]. Interviewing real patients in real practice has been shown to be valuable for learning communication skills and understanding patient illnesses. The UK's General Medical Council (GMC) emphasizes effective communication as fundamental to good medical practice[11].

To implement a more comprehensive approach, Calgary-Cambridge guides is an effective tool used to teach medical students' communication skills and practice in a comprehensive clinical method[12]. Educators can adopt the methods for teaching communication that are more effective to help learners cultivate the skills required as well as help learners set realistic goals, and teachers should know when and how to provide feedback to the learners in a way that allows a deepening of skills and a promotion of self-awareness[13-14]. Standardized or simulated patients are used for role playing specific communication skills or solving certain patient problems. Simulations are good for improving certain communication skills, and are effective in teaching and assessing communication skills.

Teaching and Learning communication skills at Oman Medical College:

Oman Medical College (OMC) is the only private medical college in Oman, and offers a seven-year curriculum, leading to the degree of Doctor of Medicine (MD). In the 4th year (first preclinical year) they learn Physical Diagnosis and Clinical Integration (PDCI) clinical skills. History taking and physical examination is conducted in the skills lab on simulated patients(16 sessions). At the end of the course, 2 theory exams and 1 clinical exam are done on simulated patients(SP). In the 5th Year of PDCI they learn clinical history taking and examination on real patients in the hospital (32 sessions). At the

end of the course Theory Exam and Practical exam of clinical skills is done on real patients in Sohar Hospital. Communication skills teaching and assessment is an integral part of clinical teaching in clinical years 6 and 7 at OMC. The Family Medicine department organizes special communication skills sessions to help the students communicate with their patients. They learn knowledge of basic communication concepts, communication models, types and functions of non-verbal communication, ability to elicit accurate, comprehensive and focused medical histories as well as communication in different difficult and special situations. Although communication skills are the integral part of every patient encounter there are few specialized skills they learn during Family Medicine rotation like breaking bad news, smoking cessation counseling, confidentiality, how to handle a difficult patient, counseling for chronic diseases (Diabetes, Hypertension, Obesity), Palliative and Geriatric care.

Self-assessment is used to assess the outcome of continuous professional development using questionnaires and checklists focusing on skills, such as performance skills and general clinical skills. Calgary Cambridge Observation Guide is used as a basis for the self-efficacy and objective assessment scores; the evaluation tools closely match the communication skills taught.

Their communication skills are assessed during the real consultation in the clinic as well as mid rotation and end of rotation in Objective Structured Clinical examination (OSCE). In the OSCE setting simulated, standardized patients are used for role playing different scenario. Simulators training are done by faculty of family medicine department maintaining a bank for simulators. At the end of each OSCE there is a feedback session with simulators regarding students' approach towards patient and communication skills. OMC maintains a SP bank managed by faculty of family medicine. The criteria to choose SP are; minimum education high school graduate, good English communication, volunteers and actors, living within the city. General training program is to give them orientation about OMC and students, OSCE and its conduct. Special training sessions are done twice, 4 weeks before OSCE on a specific scenario carefully written and reviewed by family medicine faculty. The scenario is than discussed and role play with the SP.

In final MD OSCE 10 live stations were placed including: A young female with lymphocytic leukemia diagnosis as breaking bad news, a male with ureteric colic and hematuria, a young female with Irritable Bowel Syndrome, father of one year old child develops febrile fit, middle aged male with community acquired pneumonia, a middle aged male hypertensive with recurrent Transient Ischemic Attack, an elderly male with diabetes mellitus as follow up, a middle aged women with menorrhagia (Dysfunctional uterine bleeding), young boy with acute hepatitis for abdominal examination and a young male with right knee injury for examination of knee joints.

All stations had trained SP and all stations had built in communication skills during consultation. The overall objective was how the students approach to the patient identifies the problem and manages it. Total duration for each station was 7 minutes.

This study aimed at the comparison of students' self-assessment and simulated patients' assessment on students' communication skills at the end of Family Medicine final MD OSCE.

Method

A cross sectional study done on all of the medical students who were signed up for an Objective Structured Clinical Examination (OSCE) at the Oman Medical College, June 2013 were included in this study. There were 2 sessions for simulators training for the exam and survey questionnaire by faculty.

Questionnaires

The Calgary-Cambridge Observation Guide Checklist formed the basis for the outcome measures used in the questionnaires to the students [12], the simulated patients. Twelve items were chosen, covering domains of the checklist (initiating the session, gathering information, building relationship, giving information, explaining and planning, and closing the session). The students were asked to assess how confident they felt being able to successfully manage each of the 12 different communication skills rated on a Likert scale in categories 1-5 (strongly disagree to strongly agree). The simulated patients were asked to assess how the students succeeded in managing the 12 skills rated on a similar Likert scale.

Validation of the questionnaires was done. A pilot test was performed to assess the feasibility of answering the questionnaires for the standardized patients and students during a similar OSCE examination 6 months prior to the study.

Results

Sixty eight students participated in OSCE of whom 60 responded to the questionnaire, of these -52 were women, 8 men. The response rate for the simulated patients was 100%.

Comparison of student self-assessment and simulated patient evaluation scores, when including all 12 items evaluated. Overall comparison showed that students marginally over estimated in Q 2,4,5 and 9, while remaining items showed under estimation (Figure 1).

Measures of reliability show that it is a reliable measure with Cronbach's Alpha from the 12 items being 0.89. There is one item (q10) where the simulators show an unusual pattern of responses.

When comparing between the experience and new simulators only one item (q12) showed a statistically significant difference, with $t(16)=3.08$, $p<0.05$, with

experienced simulators giving a higher score 4.55, when compared with the new simulators 3.86.

Discussion

Good and appropriate communication skills are essential for medical students to become an efficient member of a health care team in future. Self-assessment is guiding future learning, providing reassurance, and promoting reflection which helps them to perform appropriately in examination [15-16]. They can reinforce students' intrinsic motivation to learn and inspire them to set higher standards for themselves [17]. In our study medical students in the self-assessment of communication skills, do not overestimate their skills. Students have shown appropriate self-assessment in one of the history taking stations; the literature also support student's self-assessment is good for history taking attributes in an OSCE [18]. Some differences are also shown, as they have only marginally overestimated their communication skills in questions 2, 4, 5 and 9. As reported in literature that communication skills assessment measures broader aspects of attitudes towards learning communication skills this may turn out to be helpful for monitoring the effect of different teaching strategies on students' attitudes during medical school [19]. Another study has shown that students scored their communication skills lower compared to observers or simulated patients. The differences were driven by only 2 of 12 items [20]. The results in this study indicate that self-efficacy based on the Calgary Cambridge Observation guide seems to be a reliable tool that can be used for formative assessment of health professionals [21].

In Q10 of our study there is no variance in the simulators responses; that is all simulators chose "agree". This lack of variance is likely to indicate that for this question the simulators did not feel confident to 'stray' away from a default answer. They may not have understood the question or may not have felt confident to assess it. Since numbers are quite small this is difficult to ascertain. Question number 11 seems to have full agreement.

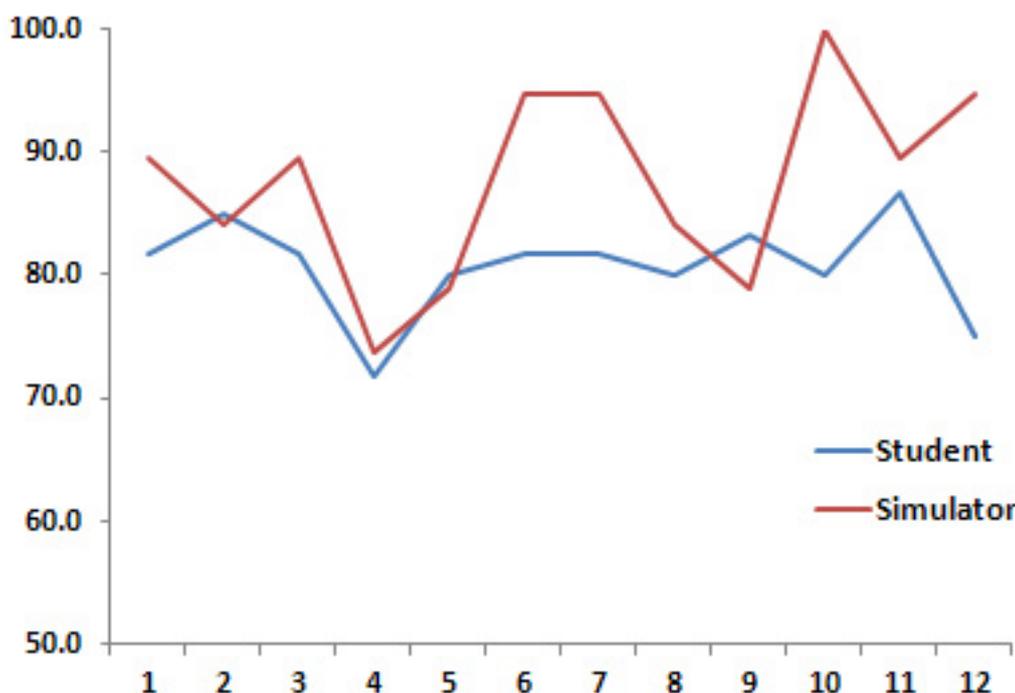
There is difference seen when we have done regression respondents who agreed and strongly agreed (Figure 2). Another interesting finding was seen in the extreme end of Likert scale which is strongly agree (Figure 3). While the students seem very consistent in the item ratings, with the average for all items being between 10 and 20% for "strongly agree", the simulators usage of "strongly agree" is much more variable, with average score ranging from 0% to nearly 40%.

It appears that on average the experienced simulators are more likely to use the extreme end of the rating scale (Figure 4). One study has reported that simulators' training compared with pre workshop standardized patient encounters, post workshop encounters showed significant improvement in communication skills [22].

Figure 1: Percentage scores for each Item. Likert scores for each item (from 1-5) are presented here as percentages

	Students Mean (St. Dev.) n=60	Simulators Mean (St. Dev.) n=20
q1 Identify problems the patients wish to address	79 11	81 10
q2 Use concise, easily understood, jargon free language	81 13	78 19
q3 Structure interview logically	79 11	82 19
q4 Attend to time keeping, and keeping interview on task	78 14	77 18
q5 Use appropriate non-verbal behavior	80 12	78 20
q6 Provide support: express concern, understanding, and willingness to help	79 11	85 11
q7 Share thought and reflection with the patient	79 11	85 15
q8 Clarify patient's prior knowledge and wish for information	79 12	80 14
q9 Check patient's understanding	81 12	78 11
q10 Negotiate mutual plan of action	79 12	80 0
q11 Contract with patient the next steps for patient and physician	81 11	81 10
q12 Summarize session briefly and clarify plan of care	79 13	85 11

Figure 2: The percentage of respondents (students and simulators) who “agreed” or “strongly agreed” with the items



While the students seem very consistent in the item ratings, with the average for all items being between 10 and 20% for “strongly agree”, the simulators usage of “strongly agree” is much more variable, with average score ranging from 0% to nearly 40%.

Figure 3: The percentage of respondents (students and simulators) who used the extreme end of the Likert scale (“strongly agree”)

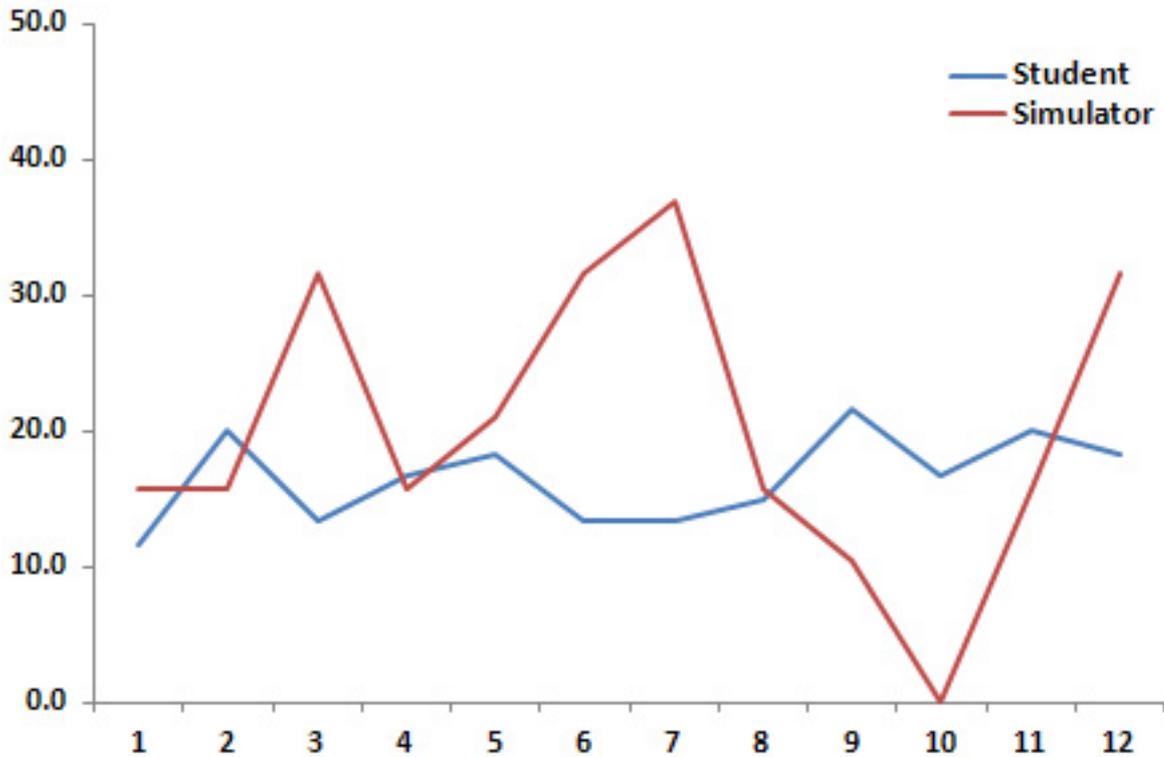
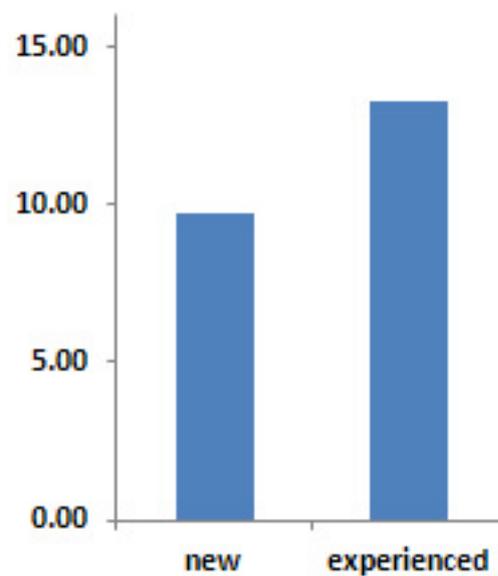
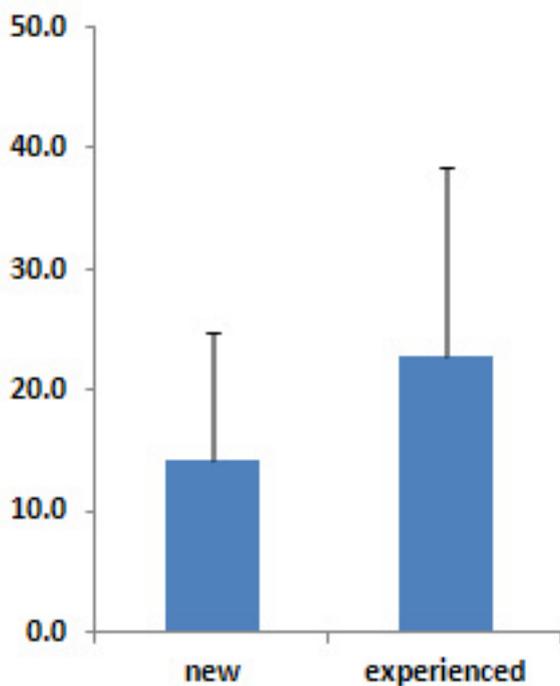


Figure 4: The percentage of simulators who used the extreme end of the Likert scale (“strongly agree”), with comparison between the new simulators and the experienced simulators

Figure 5: This figure shows the intra-rater variance for the new and experienced simulators



It appears that on average the experienced simulators are more likely to use the extreme end of the rating scale.

Standardized or simulated patients or use of well-trained actors is an alternative way of role playing specific communication skills or solving certain patient problems. Simulations can mirror reality quite closely and are good for improving certain communication skills, such as counseling and breaking bad news. Standardized patient simulations are effective in teaching and assessing communication skills[23]. In our study the experienced simulators have a higher intra-variance, and thus they are more willing to use a wider range of scores in their assessments, while the 'new' simulators, might be a little more cautious so are therefore using a more narrow and restricted range of scores in their assessments (Figure 5). One study has shown detailed constructive feedback to students from SPs is a feature of SP contribution to student learning[24]. Eva has reported that , self-assessment serves several potential functions learning communication and clinical skills, becomes a part of the training of healthcare professionals and it appears to be evident and generally accepted that communication skills are core competencies essential for good patient care[25-26]. During the training period students are exposed to real as well as simulated patients. They can practice this attribute under supervision. Preliminary research does indicate that self-assessment of clinical skills in medical schools improves the ability to self-assess in clinical practice [27]. Literature has proven that introduction and integration of structured communication skills teaching in early years contributes greatly in the development of students' strengths. The interactive examination may be a convenient tool for providing deeper insight into students' ability to prioritize, self-assess and steer their own learning [28].

Limitation:

Our study is done on final year medical students at exit level exam who may have some undue pressure on them.

Conclusion

Medical students in the self-assessment of communication skills, do not overestimate their skills; students seem very consistent in the item ratings .Students and simulated patients' assessment has some agreements. Self-assessment is guiding the future learning, providing reassurance, and promoting reflection which helps them to perform appropriately.

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Appendices

Survey Questionnaire for Simulated Patients

Simulated patients' assessment regarding students' communication skills in Family Medicine OSCE

Please tick your response: Age: in years Gender: Male Female

Occupation: Student Businessman Teacher Private job others

Education level: Undergraduate Graduate Post graduate

Acting as simulator first time Yes No

S No	Students' Attributes on Communication Skills	Strongly agree	Agree	Neither agree or disagree	Disagree	Strongly disagree
1.	Identify problems the patient wishes to address					
2.	Use concise, easily understood, jargon free language					
3.	Structure interview logically					
4.	Attend to time keeping, and keeping interview on task					
5.	Use appropriate non-verbal behavior					
6.	Provide support: express concern, understanding, and willingness to help					
7.	Share thought and reflection with the patient					
8.	Clarify patient's prior knowledge and wish for information					
9.	Check patient's understanding					
10.	Negotiate mutual plan of action					
11.	Contract with patient the next steps for patient and physician					
12.	Summarize session briefly and clarify plan of care					

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Survey Questionnaire for Students

Medical students' self-assessment regarding communication skills in Family Medicine OSCE

Age: Gender: Male Female

S No	Students self-assessment on communication skills	Strongly agree	Agree	Neither agree or disagree	Disagree	Strongly disagree
1.	Identify problems the patient wishes to address					
2.	Use concise, easily understood, jargon free language					
3.	Structure interview logically					
4.	Attend to time keeping, and keeping interview on task					
5.	Use appropriate non-verbal behavior					
6.	Provide support: express concern, understanding, and willingness to help					
7.	Share thought and reflection with the patient					
8.	Clarify patient's prior knowledge and wish for information					
9.	Check patient's understanding					
10.	Negotiate mutual plan of action					
11.	Contract with patient the next steps for patient and physician					
12.	Summarize session briefly and clarify plan of care					

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