

## Communication skills Assessed at OSCE are not Affected by Participation in the Adolescent Healthy Sexuality Program

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**Abstract: Purpose:** We proposed that first year medical students who voluntarily participated in the Healthy Sexuality adolescent program would perform better than their peers on an adolescent counseling station at the year-end OSCE (Objective Structured Clinical Examination). In addition we compared medical students' communication skills at the time of the program as assessed by self, peers and participating adolescents.

**Methods:** Nineteen first year medical students voluntarily participated in the ongoing Healthy Sexuality program. Adolescent participants, medical student peer participants and medical students assessed communication components on a 7-point Likert scale at the end of the program. At the year-end OSCE, all first year medical students at the University of Western Ontario were assessed at an adolescent counseling station by a standardized patient (SP) and a physician examiner. Statistical analysis examined differences between the two groups.

**Results:** Students who participated in the Healthy Sexuality program did not perform better than their colleagues on the year-end OSCE. A statistically significant correlation between physician examiner and SP evaluations was found ( $r = 0.62$ ). Adolescent participants communication skills assessments in the Healthy Sexuality Program demonstrated no significant correlation with medical student assessments (self or peer).

**Conclusions:** Voluntary intervention with adolescents did not result in improved communication skills at the structured year-end examination. Further investigation will be directed towards delineating differences between SP and physician examiner assessments.

**Keywords** Communication, Adolescents, OSCE, Standardized Patients, Healthy Sexuality

The physician-patient relationship is vital to the practice of clinical medicine. Communication is a key component of this relationship and is also the foundation of many clinical skills.<sup>1</sup> Good communication skills are highly correlated with patient satisfaction, compliance, perception and physician competence.<sup>1,2</sup> Most medical schools provide training in interpersonal skills; few, however, have established standardized evaluation procedures for communication skills.<sup>1</sup>

With the evaluation tools available,<sup>3-6</sup> setting standards for communication skills can be difficult. One of the difficulties in assessment of communication skills lies in who functions as the assessor.<sup>5, 7-10</sup> Physicians act as assessors for clinical skills on standardized examinations; some have demonstrated that they may be suitable for assessing communication skills as well.<sup>7,8-10</sup> Others, however, have shown a discrepancy in communication skills assessment be-

tween physicians and standardized patients (SPs).<sup>5</sup> Literature reporting poor correlation between medical students self-assessment and patient assessment further supports the notion that physicians assess skills differently than patients.<sup>1,4,7</sup>

As its intervention, this study utilizes the established medical student run Healthy Sexuality program, in which medical students volunteer as peer counselors for adolescents in a local high school.<sup>11</sup> The program framework is based on the Information-Motivation-Behavior skills model; it is designed with the premise that preventive behavior is a function of an individual's information about prevention, motivation to engage in prevention, and behavioral skills for performing the specific acts involved in prevention.<sup>12, 13</sup> The Healthy Sexuality program was designed with the goal to provide adolescents with behavioral skills that can be utilized in social situations of increasingly risky sexual behavior.

1. When speaking, I am able to cover issues in an organized manner.
2. I can problem solve openly, letting others understand that I am respecting their perspective.
3. I can summarize and close discussions in an appropriate manner
4. I can establish rapport or some level of friendliness with people.
5. I can establish rapport with adolescents.
6. I can discuss issues in an understandable manner, avoiding medical jargon.
7. I can encourage participation in discussion and asking of questions in an open forum.
8. I can encourage others to seek help when necessary, even if it is anonymously.
9. I can treat others with a caring and concerned attitude.
10. I can treat adolescents with a caring, concerned and respectful attitude

**Figure 1a.** Self-assessment completed by each medical student participant of the Healthy Sexuality program (n=19). Students rated their communication skills on a 7-point Likert Scale; responses ranged from not at all (1) to completely (7).

In this study we proposed that students who voluntarily participated in the Healthy Sexuality program (gaining experience counseling adolescents) would perform better on an adolescent counseling station on the standardized year-end Objective Structured Clinical Exam (OSCE). This assessment was performed using a communication skills tool developed by the author (DP) for this purpose. In addition, we investigated to determine if student self-assessment is a reliable measurement compared with adolescent “patients”.

## Methods

Medical students at the University of Western Ontario were recruited to participate in the Healthy Sexuality program at a peer presentation during a volunteer job fair approximately three weeks after beginning medical school. Participation involves

self-learning around topics of interest as well as a “core” curriculum presented in a hard copy binder for students to review. Role-play scenarios are presented and medical students rehearse these at their own discretion with peer presenters.

The program involves presentation of relevant sexual education material and initiation of role-playing scenarios catered specifically to the needs of high school students. One public secondary school’s grade nine students participated through their health education classes. Role-playing scenarios include addressing issues of initiating conversation, perceived gender roles, peer perceptions and pressures, boundary setting, different types of intimacy or sexual activity, symptoms of STDs, being “prepared” for responsibility, use of contraception and condom purchase and application. At the end of the sessions, medical students were asked to assess their own as well as a colleague’s communication skills using the

The medical student organized issues clearly during our discussion.

1. I feel that the student understood my perspective.
2. The student summarized our discussion well.
3. I felt that the medical student was friendly and open-minded.
4. The student discussed things in a way that I could understand.
5. The student didn’t use a lot of medical talk during our time together.
6. I felt comfortable asking questions in a group setting.
7. I felt I could ask anything I wanted by writing down my questions to be answered later.
8. I felt like the student cared about me.
9. I thought that the medical student respected me.

**Figure 1b** Questionnaire template completed anonymously by adolescent participants upon completion of the three-session Healthy Sexuality Program (n = 179). Grade nine students were instructed to evaluate each medical student on their communication skills using a 7-point Likert Scale; responses ranged from not at all (1) to completely (7).

1. Introduction by student → “Hello. My name is....”, identifies role
2. Address concerns
  - a) medical school
  - b) you’re the one I feel best speaking to
  - c) grades
  - d) relationship
3. Family
  - a) mother only
  - b) financial
  - c) brother’s situation
4. Asks generally about any other concerns
5. Close visit by booking another appointment

**Figure 2a.** Year 1 OSCE Physician Examiner Assessment: Students were given one point for completing each of the items on the checklist. In addition, overall technique (pace, body language, interruptions) and attitude towards the patient (rapport, empathy) were assessed. Each student was given a total score out of fourteen possible points.

tool in Figure 1a. Adolescent participants were asked to evaluate the medical students using a modified tool (Figure 1b). Assessments were performed on a 7-point Likert scale.

To assess inherent differences between students (Healthy Sexuality volunteers and non-volunteers), a pre-intervention survey of year one medical students

assessed communication skills for study purposes only, shown in Figure 2b.

Mann Whitney non-parametric tests and Pearson correlations were performed on the data using SPSS software. This study was funded by the Academic Enrichment Fund in the Department of Obstetrics and Gynaecology at the UWO and was approved by the UWO Ethics board.

1. The student was organized during the interview.
2. I feel that the student understood my perspective.
3. The student summarized and closed the discussion well
4. I felt that the student was friendly and open-minded
5. The student discussed things in a way I could understand.
6. The student didn’t use a lot of medical talk during our interview.
7. I felt comfortable asking questions of the student.
8. I felt like the student cared about me.
9. I felt that the student respected me.

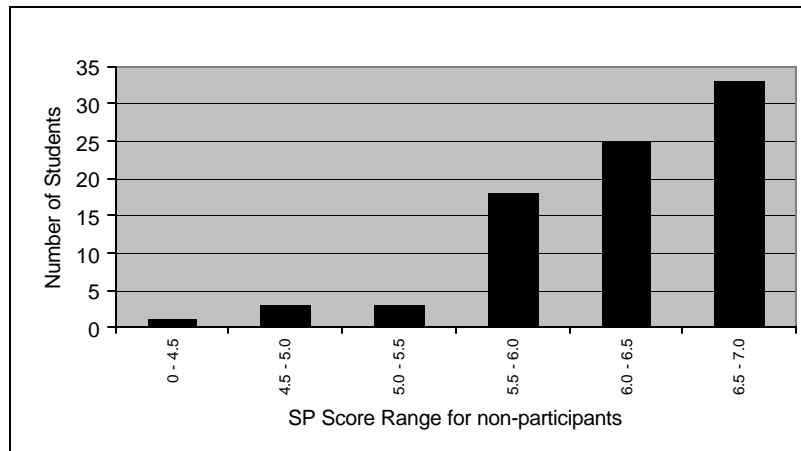
**Figure 2b** Communication skills evaluation form completed by an adolescent standardized patient at Year I OSCE. SPs were instructed to assess medical students’ communication skills on a 7 point Likert scale; responses ranged from not at all (1) to completely (7)

was administered before volunteers for the Healthy Sexuality program were recruited. Students were asked about age, gender and any experience with counseling or communication skills they may have had before beginning medical school.

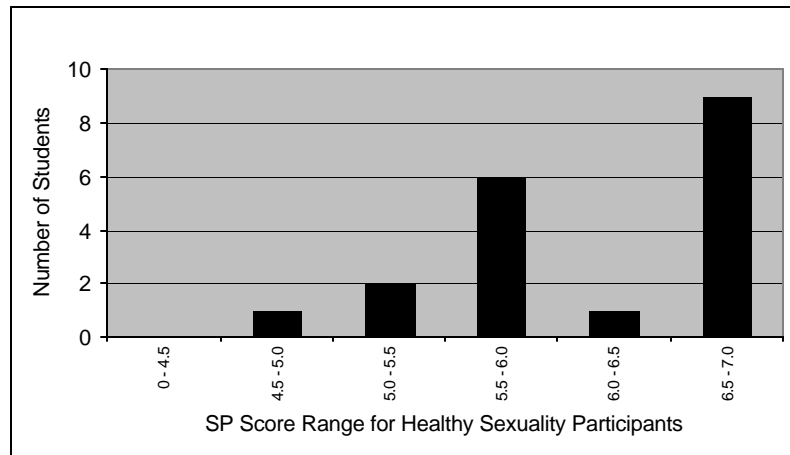
At the year end OSCE for first year students one of the ten-minute stations was designed to evaluate the students’ ability to communicate with adolescents; students were instructed to take a history focused on the adolescent’s concerns. Students were evaluated on their history-taking ability by physician examiners; the assessment is in Figure 2a. Standard-

## Results

Nineteen first year medical students (14 female and 5 male) participated in the voluntary Healthy Sexuality program. In analyzing the assessments made during the Healthy Sexuality Program, it was determined that medical students self-assessments correlated significantly with peer-assessments (Pearson Correlation;  $r = 0.62$ ). However, neither peer-assessment ( $r = 0.03$ ) nor self-assessment ( $r=0.05$ ) correlated with assessments made by the adolescents who participated in the Healthy Sexuality Program.



**Figure 3a.** Distribution of communication skills scores for medical students who did not participate in the Healthy Sexuality program (n = 85), as assessed by standardized patients ( $\mu = 6.1$ ).



**Figure 3b.** Distribution of Healthy Sexuality participants (n = 19) communication skills scores as assessed by an adolescent standardized patient ( $\mu = 6.1$ ).

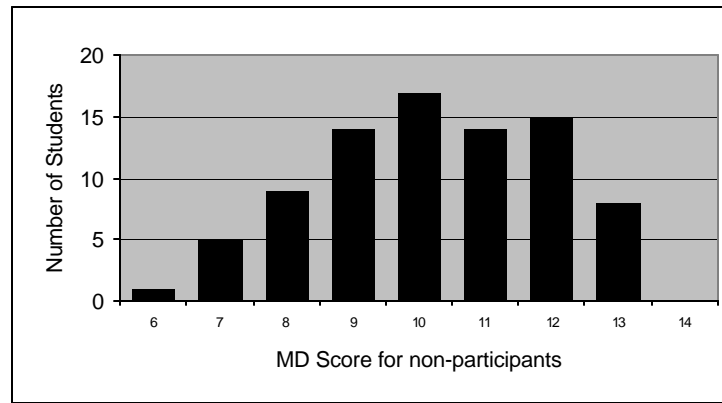
Medical students' received a mean score of 6.1 (range 1.0 to 7.0) from participating adolescents.

At the year end OSCE all first year medical students (57 male and 45 female) were rated on communication skills: physician examiner scores were recorded as a total score per student, SP scores were averaged from the 9 item 7 – point scale. Program participants did not perform better than their peers on a standardized adolescent counseling station at the final OSCE (Mann-Whitney U test;  $p = 0.42$  and  $p = 0.81$  for SPs and Physician Examiners respectively). Results were not influenced by students' gender. Graphical representations of scores given by SPs (Figure 3) and Physician examiners (Figure 4) are given. The mean SP score for Healthy Sexuality par-

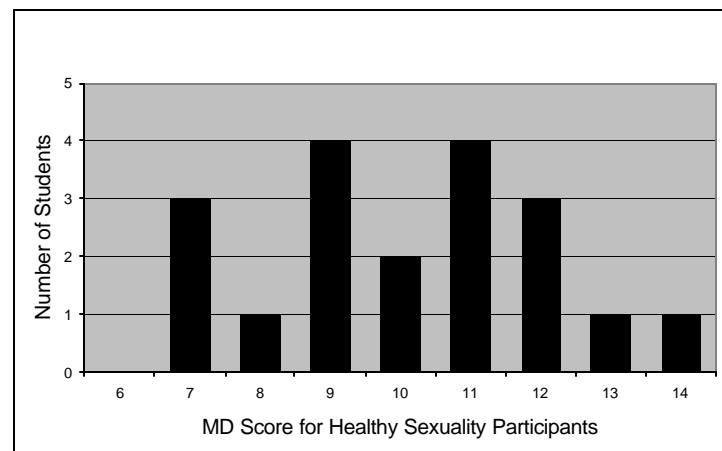
ticipants was 6.1, (range 4.7 to 6.9). Standardized Patient assessment of non-participants had a mean score of 6.3 (range 4.1 to 7.0). Physician examiners assigned scores that ranged from 7 to 14 for participants and from 6 to 13 for non-participants. The mean physician examiner scores were 10.1 and 10.2 out of 14 for the participant group and non-participant group respectively. Correlation between physicians and SP scores was statistically significant (Pearson Correlation;  $r = 0.62$ ).

### Discussion

Our communication skills assessment tool was easily incorporated into the standardized OSCE with little or no adjustment to the exam procedure already



**Figure 4a.** Distribution of Physician Examiner Assessment of First year Medical Students who did not participate in the Healthy Sexuality Program (n = 85), the average score was 10.2.



**Figure 4b.** Distribution of Physician Examiner Assessment of First year Medical Students who participated in the Healthy Sexuality Program (n = 19), the average score was 10.1.

present. It is anticipated that the communication skills tool designed for this study may be useful for standardized OSCEs or clinical exposures; this is an area of further study. Given the clustering of scores observed (Figure 3), we believe its optimal use would be to identify students who fall below a set standard, and whose skills would benefit from additional training. Previous research has concluded that communication skills training can improve history-taking confidence and that students with more training asked fewer questions at examinations and were rated as more empathetic.<sup>14</sup> Timing of such an assessment is very important; we recommend that communication skills be assessed at the end of the first or second year of undergraduate medical education in an attempt to improve skills for students who require it.

Participation in the Healthy Sexuality program was hoped to result in improved communication with adolescents. Contrary to what was expected, partici-

pation did not result in an objectively measurable improvement in communication skills. This may have occurred because the development of communication skills is not stressed in an objective manner in this student-run program. Even without this finding however, adolescent and medical student participants in the program appreciate the experience. Objective benefit may be in medical student attitudes and the adolescents' behavior, which is an issue to be assessed in another manner.

This study confirmed previous results that self-assessment is not a reliable tool for measuring communication skills, as medical students' assessment did not correlate with adolescent assessments.<sup>4,14</sup> Peer-assessment was not reliable either, as the assessments made by adolescents did not correlate at all with those made by peer medical students. The wide range of scores given to medical student participants from the adolescents may represent the true commu-

nication skills of the students; however, they also could be indicative of the varied sexual experiences of the adolescent participants. For example, although the program is tailored to the specific needs of the group, some areas may be perceived as being too elementary for some students, and this may be reflected in poor scores for medical student educators.

We did find a significant correlation between SP evaluation of communication skills and physician examiner assessment of history taking skills (Pearson Correlation;  $r = 0.67$ ). This finding contradicts results of previous studies.<sup>5</sup> It is somewhat difficult to interpret a true correlation given the differences in assessment tools between SPs (communication skills; Figure 2b) and physician examiners (history taking; Figure 2a). In fact, upon review of the physician's checklist (Figure 2a), the points given likely represent an indirect assessment of communication skills that were rated by SPs (Figure 2b). Further work in the area of who should assess communication skills is needed to delineate these differences. Our research is now focused on objective assessment and validation of our communication skills tool. It is hoped to then be used early in medical education to identify those students who require extra training.

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