Introducing Medical Students’ Cultural Communication Skills: Developing a Feedback Tool for use with a Standardized Patient Video

Paritosh Kaul, MD, Jennifer Gong, PhD, Arti Sapru, MD, Jennifer Fisher, DNP, Gwyn Barley, PhD, Gretchen Guiton, PhD

UNIVERSITY OF COLORADO, SCHOOL OF MEDICINE

Introduction

The purpose of this study is twofold: First to evaluate the reliability and validity of a items sets assessing patient-centered communication in an OSCE in the context of a single cross-cultural station and 2 stations requiring patient-centered skills, and secondly to develop a self-assessment tool for students to improve their communication behaviors in complex, cross-cultural patient interactions.

Methods

This was a multi-year study (2009-2011) of student performance on items assessing patient-centered care embedded in three standardized patient cases in a 10 station end-of-third-year OSCE. Two cases involved females with exacerbating conditions (i.e., asthma and alcoholism) affecting their presenting conditions (i.e., respiratory infection and abdominal pain). These cases were portrayed by both Caucasian and minority African American or Hispanic) SPs. Students were assigned randomly to experience one case with a Caucasian SP and the other with a minority SP. The cultural case required students to identify the health beliefs of an African American male with poorly controlled diabetes.

Item sets corresponding to the conceptual framework for CC communication address establishing a relationship, non-verbal interaction, pacing, exploring the patient’s perspective, verbal management, and collaborating in treatment planning. The reliability of item sets were assessed using Cronbach’s alpha and their validity evaluated using principal axis factor analysis. Convergent validity was assessed by investigating their association with students’ Patient Centered Beliefs measured on the Johns Hopkins instrument. Additionally we investigated the relationship between patient-centered beliefs and performance on cases with Caucasian and minority SPs using paired t-Tests. Results of the analyses and the Teal and Street CC framework informed the development of an operational guide for viewing videos. Two faculty evaluated preliminary application of the guide by viewing videos of the cultural case stratified by student level of performance. Next a comprehensive guide of culturally effective behaviors was compiled and 10th grade medical students evaluated videos of their performance on the cultural case, assessing evidence of performance and opportunities to improve performance. Following this experience the group recommended ways to improve the guide and implement self-assessment sessions.

Psychometric Properties of Item Sets

152 students completed the required end-of-third-year OSCE in 2009. The exploratory factor analysis with promax rotation of the item sets for the 2 PCC and CC case resulted in 6 factors accounting for 53% of the variance. loadings range from .41 to .91. The CC case forms the first factor with all item sets except establishing a relationship. Factors 2 and 4 consist of a single PCC case and their respective item sets for non-verbal behavior, pacing, and verbal management. Likewise factors 3 and 5 each represent one PCC case and are comprised of exploring the patient’s perspective and collaborating in treatment. A sixth factor consists of establishing a relationship for the CC case and one PCC case. This strong case based structure was reinforced in the 2010 data (n=115) where an EFA of the item sets resulted in 5 case based factors accounting for 61% of the variance.

Reliabilities of the item sets were low with only the non-verbal and pace item sets, with 6 items each, coming close to meeting a level acceptable for group comparisons (e.g., .58 and .82, respectively). Paired t-tests examine student performance in the PCC cases when portrayed by a minority SP with performance portrayed by a Caucasian SP (N = 50, 2009). Significant differences (p<.01) for non-verbal behavior, pacing, and exploring the patient’s perspective are evident with ratings by the minority SPs higher on all item sets. In contrast, performance on the CC case is significantly lower than performance with the Caucasian SP for all item sets. Analyses of the 2010 data failed to show significant differences for any item sets.

Finally we investigated the relationship among patient-centered attitudes and patient-centered behaviors for each case and year independently. Separate regression analyses were estimated for each case with the item sets establishing a relationship, non-verbal interaction, exploring the patient’s perspective, verbal management, and collaborating in treatment planning related to attitudes. Results were non-significant in all analyses with R-squared values less than .1.

In follow-up discussion about the use of the list of behaviors students generally found the number of behaviors impossible long. They suggested reducing the list and chunking sub-elements under major ones. Students strongly preferred not having a list as they felt it. Students expressed a dissatisfaction with checklists as failing to reflect the totality of the situation (the sum of the parts don’t equal the whole). The narrative summary at the end of the form was seen as a more appropriate method for self-assessment. Students also found the ability to bookmark the video with examples of behavior a positive experience.

Results

Development of Self-Assessment Tool

Students examining the effectiveness of their behaviors in Establishing the Relationship evaluated themselves as generally effective with difficulties reported in the skills of recognizing potential cultural differences, especially the specific skill of recognizing negatively perceived behavior and identifying cause. This skill area presented problems or those students evaluating their abilities. Gathering Information, but students found that difficulties extended to incorporating cultural knowledge and negotiating and collaborating skills as well. Students failed to assess factors contributing to understanding and aspects of context influencing self-care. While students used open-ended communication to learn about the patient’s explanatory model they failed to explicitly assess some aspects of patient’s beliefs and situation. As one student noted, they focused heavily on medical aspects failing to get broader context information. When it came to Managing the Problem, students were more skilled in recognizing potential cultural differences, but were less skilled in incorporating this knowledge or negotiating with the patient. The students did make an effort to describe tests, procedures and treatments, but a number of them reported missing an opportunity to deepen their understanding of the patient’s perspective or to plan management in a truly collaborative way. Across functions of the medical encounter, students evaluated their non-verbal behaviors. Students identified behaviors like looking at and writing notes, interrupting the patient, and fidgeting or sitting rigidly still as common deficits in performance. They also noted that the videos, despite having 3 camera views, failed to provide evidence to judge facial expression and eye contact.

Conclusions

Meaningful behaviors supporting patient-centered care can be assessed in an OSCE, but students ability to perform patient-centered care appears to highly case specific. This implies the need to provide feedback to students at the case level.

The influence of SP race on case performance is not borne out by our data. Differences in case performance is not related to Patient-centered Care Health Beliefs in our data. These results contrast those of Beach, et al. suggesting that further research on the role of patient centered health beliefs in student behavior is called for, and that beliefs may not be an useful proxy for behaviors.

The factor analysis suggests that non-verbal behavior ratings are critical in differentiating patient-centered skills and that this is an important component to incorporate in OSCE ratings. This may be especially important as video review misrates critical aspects of non-verbal behavior such as facial expression and eye contact.

Students ability to review and reflect on their own performance is enhanced by the use of video. Students in our group clearly valued the opportunity to examine their performance once they had some distance on the experience. Whether a guide is necessary to support students ability to identify and evaluate their performance was not evident to the students themselves. Similar results were obtained by Thompson, et. al. in their effort to have students identify context clues by comparing their own video bookmarks with those of an SP. Further examination of effective methods of self-assessment are needed.

References