A Decade of Objective Structured Clinical Exam (OSCE) Communication Scoring Trends In Pharmacy Students

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Background

- Communication is recognized as a core competency for pharmacists globally.
- Objective Structured Clinical Examinations (OSCEs) are a commonly used assessment method in pharmacy education that require student pharmacists to interact with a standardized participant (SP) to assess both clinical and communication skills.
- At Western University of Health Sciences College of Pharmacy, student pharmacists are assessed on communication skills across a variety of scenarios and settings during their OSCEs.
- Communication scores are assigned using a validated rubric consisting of six domains (Table 1), with each domain being assigned a score of 0-3, for a maximum total score of 18. Depending on the station type, a communication grade is assigned by a SP, a faculty member, or both.
- After collecting over a decade of OSCE communication grade data, OSCE facilitators wanted to determine if there were differences in student communication performance across the variety of different OSCE case types.

Objective

- To examine patterns in student pharmacist communication performance on multi-station OSCEs based on grader type, practice setting, and station type.

Methods

- This study was a retrospective cohort review.
- In-person OSCE communication scores from second- and third-year pharmacy students were compiled for graduating classes of 2013-2021.
- Student scores were excluded if they withdrew, were dismissed from the program, or did not progress in the curriculum on schedule for any reason.
- Scores by grader type were analyzed by rubric domain using a t-test and by setting and station type using one-way ANOVA.

Table 1: Descriptions of the Six Global Communication Rubric Domains

Domain	1	2	3	4	5	6
Skill tested	Verbal Expression: Mechanics	Verbal Expression: Content	Non-Verbal Expression	Interaction with patient/ provider	Organization and Logic	Professional appearance and Rapport
Skill criteria	Grammar Pronunciation Filler words Rate Volume	Vocabulary Jargon Open-ended questions	Eye contact Distracting gestures Awkward pauses	Active listening Empathy Respect Confidence	Flow of encounter Control of session	Introduction Attire Teach back Closure

Results

Table 2. Mean Faculty vs. Standardized Participant (SP) Global Communication (GC) Scores

	SP	Faculty	P-value
Overall	14.82	14.73	P<0.001
Setting			
Community	14.89	14.55	P<0.001
Ambulatory Care	14.79	14.71	
Inpatient	14.50	15.14	
Drug Information Center	N/A	14.93	
Station Type			
Drug device counseling	14.87	14.57	P<0.001
Clinical Encounter	14.77	14.96	
MD Call	N/A	15.11	
Evidence-based Practice	N/A	14.93	

Global Communication (GC) Score out of max score of 18

Figure 1. Mean Global Communication (GC) Score by Clinical Setting

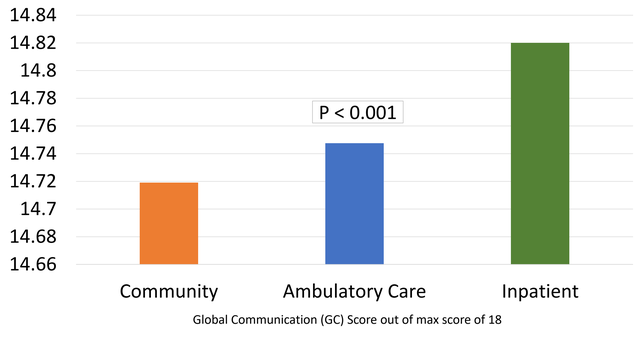
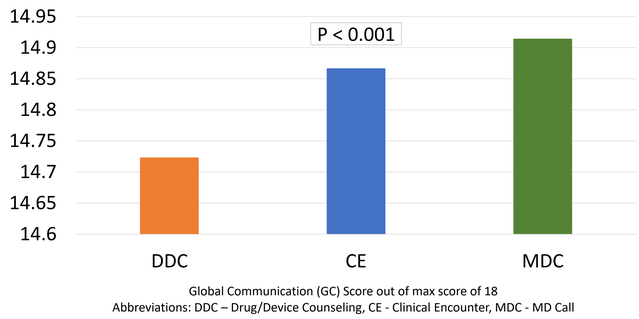
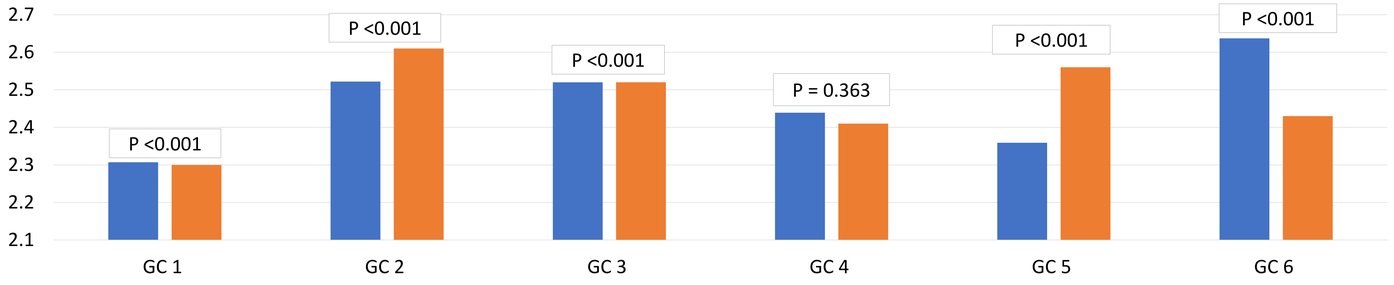


Figure 2: Mean Global Communication (GC) Score by Case Type



Abbreviations: DDC – Drug/Device Counseling, CE - Clinical Encounter, MDC - MD Call

Figure 3: Overall Faculty vs. Standardized Participant (SP) Grades by Global Communication (GC) Domain



Each Global Communication (GC) domain score out of max score of 3
Abbreviations: GC 1 - 6 - Global Communication Domains 1 - 6

Discussion

- The mean global communication score was >80%, demonstrating satisfactory competence in communication.
- Communication scores differed between faculty and SPs (Table 2)
  - May be due to variability in training on the GC rubric or inter-grader variation
  - Although statistically significant, the magnitude of this difference would not alter a student's letter grade and larger differences in communication scores were observed based on station type and setting.
- Communication scores were lowest in the community setting and in providing drug/device counseling (Figures 1,2).
  - Possibly due to:
    1) limited experience of student pharmacists within this setting
    2) lack of confidence or familiarity in drug/device counseling
    3) a potential loss of skills without reinforcement, as OTC/self-care is taught in year 1 of our curriculum with a shift to clinical focus in years 2 and 3
- Higher communication scores were achieved in the inpatient setting and with provider phone call interactions (Figures 1,2).
  - Might suggest that the current GC rubric may not apply universally across all settings. Some items may not apply to specific settings or scenarios, thus artificially inflating GC scores
- Communication scores also varied across the six domains of the GC rubric between faculty and SPs (Figure 3).
  - Variability in scoring may be due to: inter-grader variation, higher expectations among faculty in specific domains, and direct vs. indirect observation of students during testing.

Conclusion

- Examination of 10 years of OSCE communication score data showed significant differences in both overall score and scoring per domain between faculty graders and SPs.
- Student pharmacist performance in the community setting providing drug/device counseling showed the lowest mean communication scores, indicating that they may require additional practice opportunities of this common skill-set and setting in our curriculum.
- Inpatient phone call stations resulted in the highest communication scores, which may require a re-examination of the rubric in order confirm its ability to assess communication in this unique format.

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