

# Influence of a Peer-Led Mock OSCE on Student Performance and Student and Peer Tutor Perceptions



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## INTRODUCTION

- Objective structured clinical examinations (OSCE) are highly associated with student stress compared with other types of assessments.
- Peer-assisted learning programs (PAL) such as a mock OSCE (MOSCE) may:
  - Increase cognitive and psychomotor development<sup>1,4,5</sup>
  - Improve confidence<sup>1,2,4,5</sup>
  - Increase valued feedback<sup>2,4</sup>
  - Increase OSCE scores<sup>3,5</sup>
  - Promote mutual learning environments
- Few studies analyze impact of such programs including a mock OSCE in pharmacy education.

## OBJECTIVE(S)

- To examine the impact of a novel peer-led MOSCE on student performance and peer grader and student perceptions

## METHODS

### Study Design

- Retrospective quantitative and qualitative cohort study conducted in Fall 2022 semester

### Study Participants

- P1 students: enrolled in PHAR 7118 Physical Assessment Skills Lab course
  - Mock participants: P1 students that attended the mock OSCE
  - Non-participants: P1 students that did not attend the mock OSCE
- Peer tutors: P2-P4 students that acted as mock patients and graders during the mock OSCE

### Mock OSCE Event

- MOSCE was conducted after the low stakes OSCE and prior to the high stakes OSCE.
- Peer tutors were provided rubrics for evaluation and conducted the mock OSCE similarly to the high stakes OSCE.
  - Evaluated on blood pressure (BP) and diabetic foot exam (DFE) techniques and communication/interview skills

### Data Collection

- Voluntary, anonymous surveys through Qualtrics were administered pre- and post-MOSCE event to participants, after the MOSCE event to peer tutors, and after the low stakes/before the high stakes OSCE for non-participants. Surveys analyzed:
  - Baseline demographics
  - Preparedness/confidence scores (for P1 students)
  - Perceptions about the event
  - Reasons for not attending the MOSCE (for P1 non-participants)
- Low, mock, and high-stakes OSCE scores were collected.

### Statistical Analysis

- Descriptive statistics and Chi square analysis for baseline demographics and perceptions
- Paired sample T-test for preparedness and confidence scores pre- and post-MOSCE
- Independent samples T-test for comparison of participants and non-participants scores

## RESULTS

Table 1: Baseline Demographics of MOSCE Participants vs. Non-Participants. Of the 21 MOSCE participants, 17 (81%) responded to the pre- and post-surveys. Of the 53 non-MOSCE participants, 26 (49.1%) responded to the survey.

	Mock Participants, n = 17	Non-Participants, n = 26	P-value
Mean Age		25.56	27.28
Gender		0.403	
Male	3 (17.6%)	7 (26.9%)	
Female	14 (82.4%)	17 (65.4%)	0.35
Race/Ethnicity			
Gender-Fluid	0 (0%)	2 (7.7%)	
Caucasian Non-Hispanic	6 (35.3%)	3 (11.5%)	
Hispanic/Latino	1 (5.9%)	6 (23.1%)	
African American/Black	4 (23.5%)	0 (0%)	0.022
Asian	5 (29.4%)	12 (46.2%)	
Multiple/Other	1 (5.9%)	3 (11.5%)	
Prefer not to answer	0 (0%)	2 (7.7%)	
Highest Degree Earned			
High School	1 (5.9%)	4 (15.4%)	
Undergraduate	13 (76.5%)	19 (73.1%)	0.58
Graduate	3 (17.6%)	3 (11.5%)	
Prior Clinical or Pharmacy Experience	Yes	15 (88.2%)	13 (50.0%)
	No	2 (11.8%)	13 (50.0%)
		0.01	

Figure 1: Preparedness and Confidence Scores in Different OSCE Outcomes Before and After MOSCE in Participants vs. Non-Participants.

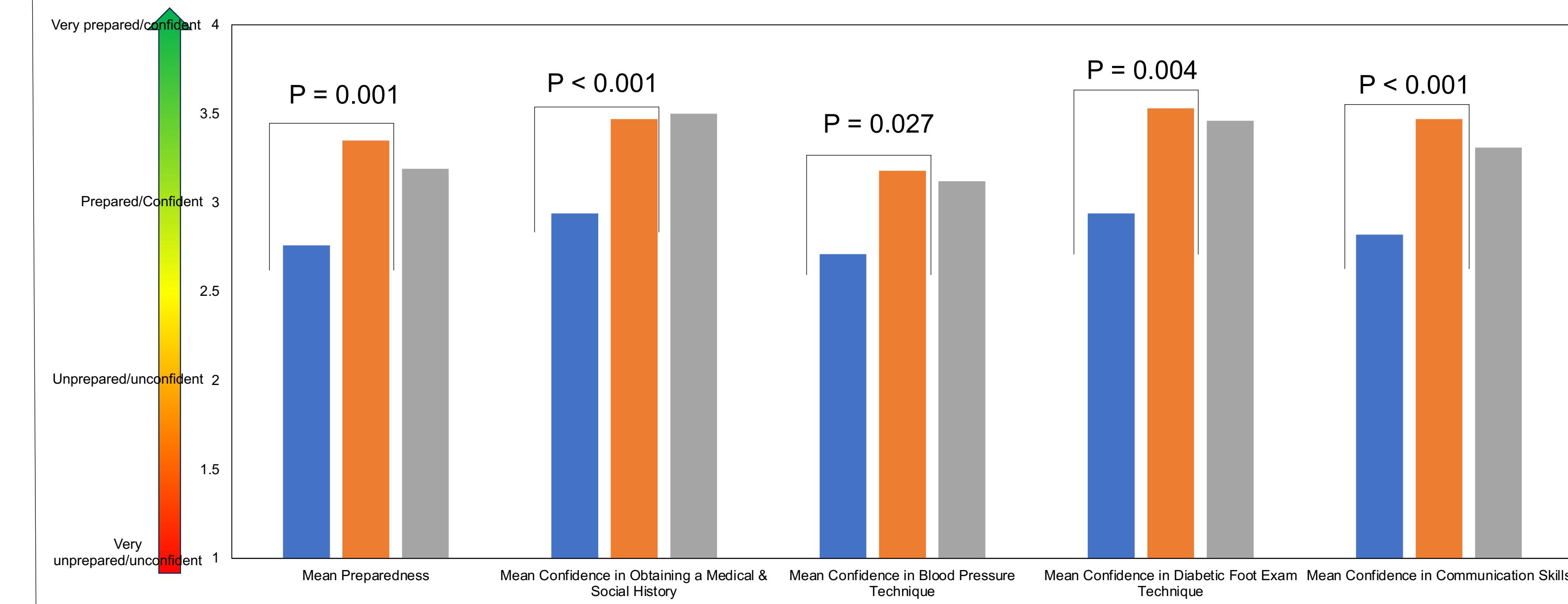
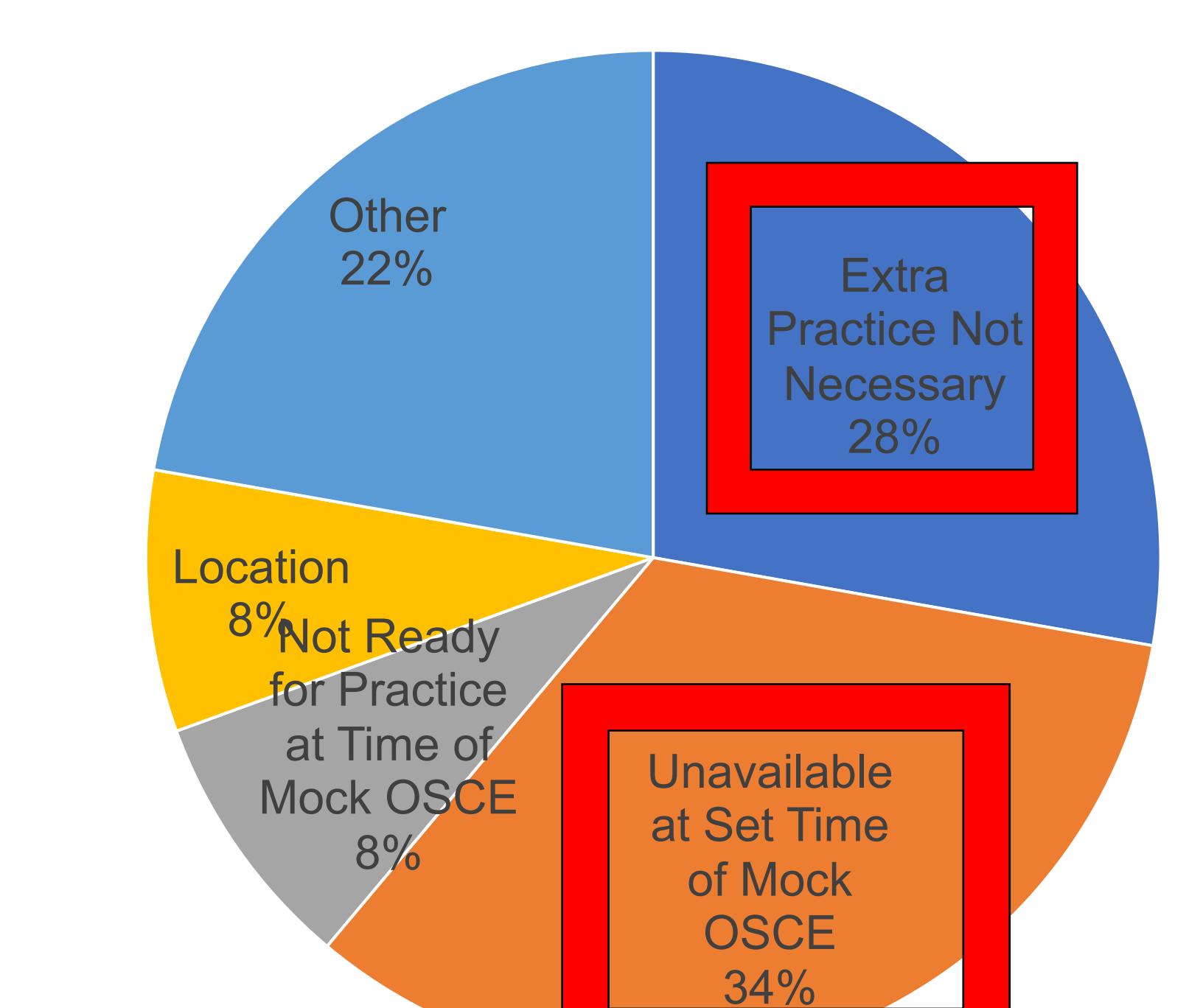


Figure 2: Cited Reasons for Non-Participation in MOSCE.



## RESULTS (CTD.)

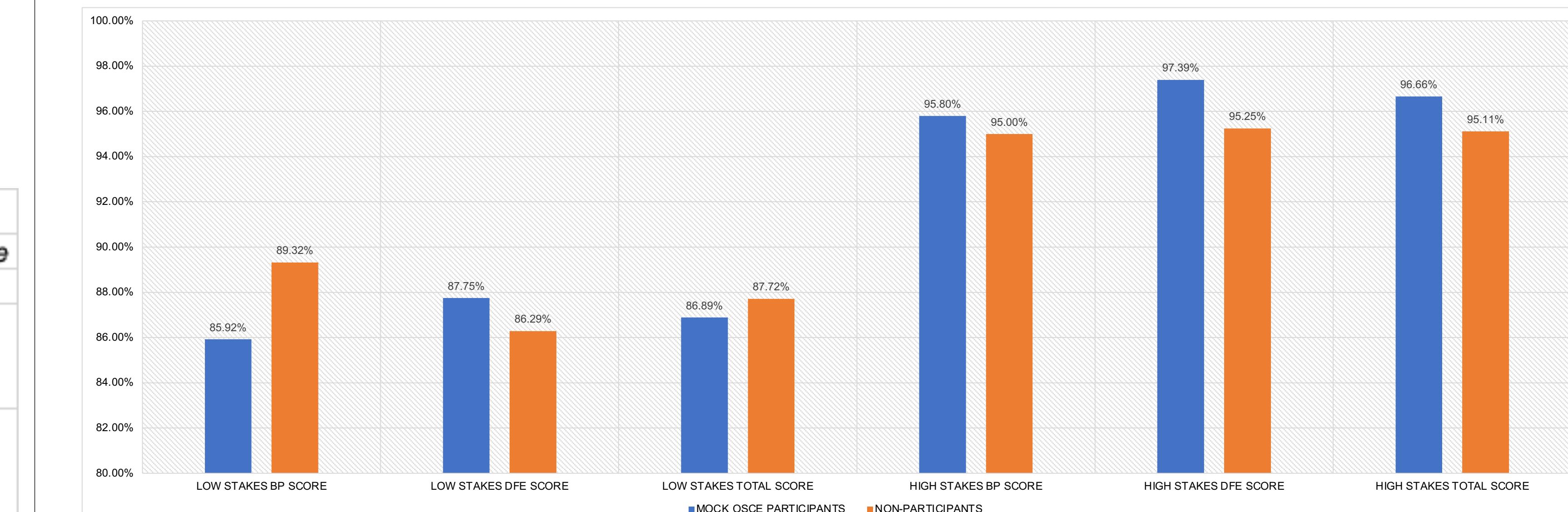
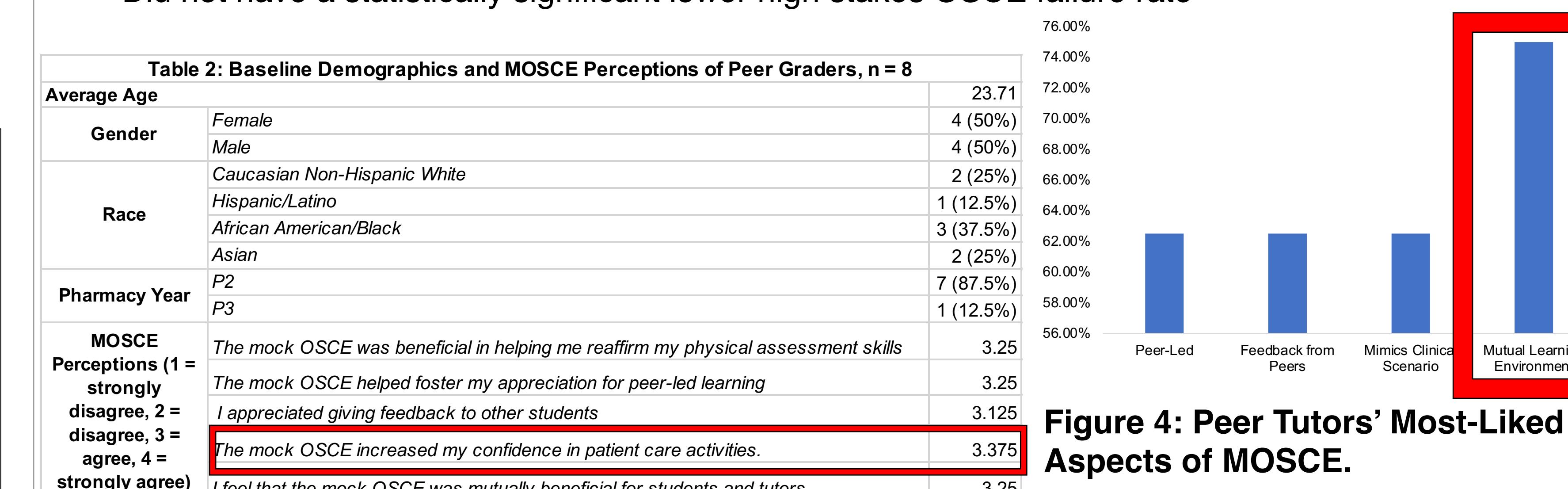


Figure 3: Low Stakes vs. High Stakes OSCE Scores in Participants vs. Non-Participants. Total and BP technique low-stakes OSCE scores were higher in non-participants, but MOSCE participants were found to have higher BP, DFE, and total high-stakes scores ( $P > 0.05$ ).

### Surprisingly, mock OSCE participants:

- Who had passed the low stakes OSCE had 3.6 times higher odds [OR 3.60, 95% CI (1.34-9.64)] of attending the mock OSCE than those who did not pass the low stakes OSCE
- Did not have a statistically significant lower high stakes OSCE failure rate



## CONCLUSIONS

- MOSCE participation was associated with an increase in preparedness and confidence in performing OSCE skills but was not associated with a lower failure rate on the high stakes OSCE or better OSCE performance.
- Most non-participants cited unavailability (34%) and extra practice not necessary (28%) as reasons for not participating in the MOSCE.
- Peer tutors agreed/strongly agreed that the MOSCE increased confidence in patient care activities and cited the mutual learning environment (75%) as the most-liked aspect.
- Future studies:
  - Analyze impact of MOSCE prior to low stakes on performance and confidence
  - Increase availability and accessibility of MOSCE sessions
  - Collect data from multiple cohorts



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