New Research

Do MCAT Verbal and MCAT Writing Scores Correlate With Performance on a Third-year OSCE?

To the Editor:
The Medical College Admission Test (MCAT) serves as a benchmark for the admissions process and is a good predictor of preclinical performance and board exam scores. The ability of the MCAT to predict clinical performance is a topic of active debate. There is little evidence that MCAT scores accurately predict effective communication skills in the context of patient care.

Our study examined the relationship between the MCAT verbal and writing sample scores and medical student performance on a validated family medicine objective structured clinical exam (FM-OSCE). We hypothesized that MCAT verbal and writing scores would correlate directly with FM-OSCE scores to provide an objective measure of student communication skills.

Methods
Following institutional board approval from the Uniformed Services University (USU), we retrospectively examined MCAT verbal, writing, physical science, and biological science scores from the classes of 2006–2008. We also examined subjective verbal communication scores on the USU admissions interview and student scores on the USU FM-OSCE.

MCAT verbal, biological science, and physical science scores were entered from the American Medical College Application Service (AMCAS) data provided on each student’s USU application. MCAT writing sample (MCAT-WS) scores were converted from alphabetic scores to a numeric score (0 for J through 10 for T). All data were exported into SPSS® v. 16 for analysis. We used basic descriptive statistics for group characteristics. Pearson’s product-moment correlation coefficients were calculated to determine association strength and direction between paired variables. An analysis of power suggested that a sample size of 450 students would have 80% power to detect correlations of at least 0.15 with a 5%, two-sided significance level.

Results
Data were available for 480 USU graduates. The average MCAT verbal score was 9.2 (range 2–13; standard deviation [SD]=1.7). The average MCAT writing sample score was 6 (range 1 to 10; SD=2.0). The average verbal and communication skills interview score was 2 (range 1 to 5; SD=1.0). There was a statistically significant association between both the MCAT verbal ($r=0.134; P<.005$) and MCAT writing sample ($r=0.115; P<.02$) scores and performance on the FM-OSCE.

There was no association between applicant interview scores ($r=0.064, P=NS$), MCAT biological science ($r=0.044, P=NS$), MCAT physical science ($r=0.068; P=NS$) scores and FM-OSCE scores (Table 1).

Discussion
Effective communication is an essential element of clinical success. Patient communication skills are a core professional competency. Poor communication skills correlate directly with poor patient management and increased patient complaints to regulatory authorities. We found a small, but statistically significant, association between MCAT verbal and writing sample scores and performance on the FM-OSCE. While our effect size is small, the positive correlation between MCAT verbal and writing sample scores supports a direct relationship between communication skills and patient care.

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Table 1
Pearson Product-Moment Correlation Coefficients of FM OSCE Scores and Scores on the Medical College Admissions Test (MCAT) Along With Admission Interview Scores

<table>
<thead>
<tr>
<th>Component Score</th>
<th>Pearson Correlation</th>
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<tbody>
<tr>
<td>MCAT-V</td>
<td>0.134 ($P&lt;.05$)</td>
</tr>
<tr>
<td>MCAT-WS</td>
<td>0.115 ($P&lt;.02$)</td>
</tr>
<tr>
<td>Interview Score</td>
<td>-0.55 ($P=NS$)</td>
</tr>
<tr>
<td>MCAT-PS</td>
<td>0.068 ($P=NS$)</td>
</tr>
<tr>
<td>MCAT-BS</td>
<td>0.044 ($P=NS$)</td>
</tr>
</tbody>
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MCAT-V—verbal  
MCAT-WS—writing sample  
MCAT-PS—physical science  
MCAT-BS—biological science

Certainly a big part of geriatrics, but care in these areas needs to be provided in new and innovative ways that will be exciting to the generation of young physicians that will provide the care. And, we need to do more to expose our trainees to the vigorous, healthy, older adults who can most benefit from preventive measures to keep them vigorous and healthy. In a world where people in their 90s run marathons—and do so in respectable times—there is no excuse for limiting geriatrics training to nursing homes, hospices, and hospitals.

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clinical performance in the third year of medical school.

Our study has several important limitations. We used a single institution (USU) and a single OSCE evaluation. This limits generalizability. We do not know if the FM-OSCE predicts clinical performance on other rotations. Our finding that both the MCAT-V and MCAT-WS scores correlate with performance on our OSCE supports the concept that objective measures of communication skills can predict clinical performance. Our findings have potentially important implications for medical school admissions committees when deciding what role MCAT-V and MCAT-WS scores play during the medical school admissions process.

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REFERENCES


