Predicting Student Professionalism in Medical School: A Situational Judgment Test

Admissions and Selection Program
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7 years of rigorous research

- 2012: Comp. Model
- 2014: Critical Incident Study
- 2015: SJT Prototype
- 2016: Field Test
- 2017: Validity Study Launch
- 2019: Field Test
The AAMC SJT is supported by comprehensive research.

• Reliable and valid
• Lower group differences than academic tests
• Correlates with medical school performance

The AAMC SJT could add value.

• Easy to use for examinees and admissions officers
• Offer a balance to existing academic metrics during pre-screening to facilitate holistic review
• Help identify applicants who may be at risk of professionalism issues or have strong professionalism skills
• Help broaden the diversity of applicants considered for interviews
What we know about the SJT
The AAMC SJT:

- Customized for US medical schools
- Developed with input from medical school faculty and staff
- Is reliable and valid
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- Demonstrates smaller group differences
- Designed to minimize burden on applicants
- Easy-to-use in application pre-screening
- Signals the importance of pre-professional competencies
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Applicants need more than academics to be ready for medical school

• Medical school curricula include instruction and training about academics, interpersonal skills, clinical care, and professionalism

• Medical school and practice “derailers” are often related to a lack of professionalism

• It’s harder to remediate students with professionalism issues than academic issues
Medical schools want to identify students who are prepared to:

• Work in a diverse learning environment
• Serve the health needs of underserved populations
• Serve the health needs of local communities
• Serve as next generation of medical leaders
• Demonstrate pre-professional competencies
Admissions officers believe the AAMC SJT can add value to pre-screening.

- Hardest thing to remediate is professionalism
- SJT scores could be used to:
  - Expand the applicant pool in pre-screening
  - Evaluate applicants in the “gray zone”
  - Help sift through high application volumes
  - Compare with in-person interview evaluations

Desire for evidence:
- Reliability, validity
- Coaching effects
- Outcomes
- No disadvantage to under-represented applicants

Fall 2017, 3 focus groups with admissions officers representing 21 schools
Identify possible professionalism issues

<table>
<thead>
<tr>
<th>Academic Metrics</th>
<th>Low</th>
<th>High</th>
</tr>
</thead>
<tbody>
<tr>
<td>High</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Low</td>
<td></td>
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</tbody>
</table>
Broaden the in-person interview pool

### AAMC SJT Scores

<table>
<thead>
<tr>
<th>Academic Metrics</th>
<th>Low</th>
<th>High</th>
</tr>
</thead>
<tbody>
<tr>
<td>High</td>
<td><img src="image1.png" alt="High Low Academic Metrics" /></td>
<td><img src="image2.png" alt="High High Academic Metrics" /></td>
</tr>
<tr>
<td>Low</td>
<td><img src="image3.png" alt="Low Low Academic Metrics" /></td>
<td><img src="image4.png" alt="Low High Academic Metrics" /></td>
</tr>
</tbody>
</table>
Improve the in-person interview pool
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AAMC SJT was developed in partnership with medical schools

Items must pass subject matter expert review at every step to be included on the test.

- Competency Modeling
  - Subject Matter Experts
- Critical Incident Writing
  - Subject Matter Experts
- Item Writing
  - Item Writing Experts
- Bias & Sensitivity Review
  - Subject Matter Experts
  - Inclusion criteria
- Healthcare Experience Review
  - Subject Matter Experts
  - Inclusion criteria
- Scoring Key Development
  - Subject Matter Experts
  - Inclusion criteria
AAMC SJT is designed to measure

Examinees’ understanding of effective pre-professional behaviors across eight core competencies
Sample SJT Scenario and Items

While viewing one of your classmate’s social media profile, you notice that your classmate has made negative comments about treating a recent patient. Your classmate describes the patient and the patient’s condition in detail, which violates patient privacy regulations. Please rate the effectiveness of each response to this situation.

1. Ask your classmate to remove the comments.
2. Report your classmate to your professor.
3. Talk to your classmate about keeping patient information confidential.
4. Ask your other classmates if they think the comments are appropriate.
5. Stop reading your classmate’s social media comments so you no longer see comments with patient information.
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AAMC SJT is a reliable test

- Differentiates among examinees
- Reliability met the standard for SJTs reported in the literature and practice
- Created multiple SJT test forms in terms of content and difficulty
- Confirmed scores across SJT forms have the same meaning
Applicant and Medical Student

- MCAT
- GPA
- Coursework
- Biographical info
- Personal statement
- Letters of recommendation
- Interviews
- Course grades
- Test scores
- Step scores
- Honor society nominations
- Faculty evaluations

(American Association of Medical Colleges, AAMC)
Interpreting correlations

- Height and shoe size: $r = 0.62^1$
- SAT and GPA: $r = 0.53^2$
- Structured interviews and work performance: $r = 0.44^3$
- SJT and work performance: $r = 0.26^4$
- Conscientiousness and work performance: $r = 0.24^5$

- Why do these correlations get smaller?
  - Hard to measure
  - Complex outcomes
- We expect SJT-performance correlations will be in the small range.

References:
AAMC SJT correlates with personality

Sample: 2016 Field Test (n = 2,021), 2019 Field Test (n = 1,179)
AAMC SJT correlates with in-person interview scores

Sample: 2017 Validity Study (n = 255 for Interviews, 102 for Semi-Structured Interviews)
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AAMC SJT predicts medical student performance

*corrected for unreliability and range restriction
Sample: 2017 Validity Study (1n = 51-184; 2n = 227-245)
AAMC SJT predicts medical student pre-professional competence

Sample: 2017 Validity Study (n = 227-245)
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### AAMC SJT has smaller group differences than achievement tests

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<thead>
<tr>
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<th>Stdz Group Difference</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Race/ethnicity</strong></td>
<td></td>
</tr>
<tr>
<td>White – Black</td>
<td>Small</td>
</tr>
<tr>
<td>White – Hispanic</td>
<td>Small</td>
</tr>
<tr>
<td>White – Asian</td>
<td>Small</td>
</tr>
<tr>
<td><strong>Gender</strong></td>
<td></td>
</tr>
<tr>
<td><strong>Fee Assistance</strong></td>
<td>Small</td>
</tr>
<tr>
<td><strong>SES (EO indicator)</strong></td>
<td>None</td>
</tr>
<tr>
<td><strong>English Proficiency</strong></td>
<td>Small</td>
</tr>
<tr>
<td><strong>US Citizenship</strong></td>
<td>None</td>
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AAMC SJT is easy to use for applicants

**Prepare**
- Preparation materials will be available
- Practice test will be available

**Take**
- Remote-proctoring allows examinees to complete the SJT in a location of their choice
- SJT total scores provided to examinees

**Apply**
- SJT score scale and percentile ranks help to interpret an examinee’s score relative to other examinees
- SJT total scores delivered to schools
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AAMC SJT is easy to use for schools

• AAMC will:
  • Deliver SJT scores to schools along with other AMCAS data
  • Establish an SJT score scale
  • Provide training and guidance on how to incorporate SJT scores into the admissions process
  • Continue to research the SJT and make results available to help users understand the meaning of SJT scores
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“The situations and questions are well-written and have a clear relationship to ethical and professional characteristics expected of doctors.”

“This is a great idea. I would love to see this implemented into the medical student selection process. I believe that it brings the culture aspect and "humanity" back to the forefront of medicine.”

“The SJT is a very interesting test, and it is great to experience taking it as I continue my application process. I think providing this type of exam to applicants will generate a more improved awareness of the qualities necessary for medical students.”

“I thought this was a fair assessment for the emotional capacity, personal tact, and coping skills required in medical school.”
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AAMC SJT in comparison

Developed for medical school admissions and in collaboration with medical schools

Carefully designed to balance reliability, validity, fairness, cost, burden, etc.

Designed to minimize burden and provide scores to applicants

SJT scores and resources provided to schools for easy use
Interested in the AAMC SJT?

Are you interested in using the AAMC SJT in your admissions process?
   Email ddunleavy@aamc.org or rfraser@aamc.org

Are you interested in reviewing SJT items or creating the scoring key?
   Email SJT@aamc.org