

Assessing Medical Students' Interpersonal Skills and Their Predictive Value for Future Internship and Job Performance

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Origin of project

Develop a selection procedure

- ▶ To measure interpersonal skills.
- ▶ To create a better image of the organization.
- ▶ For large groups.
- ▶ To « select out » candidates.

An Alternative Selection Procedure: The Low-Fidelity Simulation

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From critical-incident analysis and judgments by subject-matter experts, a low-fidelity simulation was developed for selecting entry-level managers in the telecommunications industry. The simulation presents applicants with descriptions of work situations and five alternative responses for each situation. It asks them to select one response they would most likely make and one they would least likely make in each situation. In a sample of approximately 120 management incumbents, simulation scores correlated from .28 ($p < .01$) to .37 ($p < .01$) with supervisory ratings of performance. These results show that samples of even hypothetical work behavior can predict performance, without the props, equipment, or role players often required by high-fidelity simulations, such as work-sample tests or assessment centers.

Simulations used for employee selection typically present applicants with a task stimulus that mimics an actual job situation and elicit responses that are interpreted as direct indicators of how applicants would handle the task situation if it were actually to occur on the job. Thus, job simulations are designed more to sample job behaviors than to provide signs of underlying ability, temperament, or other traits presumed necessary for job performance. Arguing the basic tenet of behavioral consistency—that past performance is the best predictor of future performance—Wernimont and Campbell (1968) claimed that behavioral samples like those elicited by simulations can be very useful for predicting job performance, probably more useful than predispositional signs, such as results of standard ability, personality, or interest tests. Some forms of simulation, such as work samples and assessment centers, are by now familiar selection tools, and results of meta-analytic reviews show impressive support for their validity (Hunter & Hunter, 1984; Schmitt, Gooding, Noe, & Kirsch, 1984).

Simulations vary in the fidelity with which they present a task stimulus and elicit a response. The highest fidelity simulations use very realistic materials and equipment to represent a task situation and provide applicants with an opportunity to respond almost exactly as if they were actually in the job situation. Fidelity decreases as stimulus materials and responses be-

veridical representation of the task stimulus and elicit actual responses for performing the task (e.g., work samples, assessment centers, etc) are referred to as *high-fidelity* simulations. Simulations that present only a written or spoken description of the task stimulus and elicit only a written or spoken description of the response that would be taken are referred to as *low-fidelity* simulations.

Because high-fidelity simulations more closely resemble actual work conditions than do low-fidelity simulations, high-fidelity simulations ought to be better indicators of future job performance, according to the logic of behavioral consistency. It is not clear, though, just how much fidelity is necessary before a simulation can become usefully predictive, or conversely, how much fidelity can be sacrificed before a simulation loses a substantial amount of predictive potential. High-fidelity simulations can be very expensive to develop and implement because of the equipment and props necessary to lend them realism. In fact, the cost of high fidelity may not even offset the gain in predictive potential. This makes it worthwhile to explore the predictive usefulness of low-fidelity simulations. They might make it possible to take advantage of the predictive logic of behavioral consistency without the excessive costs that can preclude the development or implementation of high-fidelity simulations.

Situational judgment tests (SJTs)

Present job-related situations & MC responses to them.

Measure procedural knowledge about costs & benefits of engaging in specific courses of interpersonal action

Terms

- ▶ Low fidelity simulation
- ▶ Situational judgment inventory
- ▶ Tacit knowledge test

Example Admission SJT item

Patient : So, this physiotherapy is really going to help me?

Physician: Absolutely, even though the first days it might still be painful.

Patient : Yes, I suppose it will take a while before it starts working.

Physician: That is why I am going to prescribe a painkiller. You should take 3 painkillers per day.

Patient: Do I really have to take them? I have already tried a few things. First, they didn't help me. And second, I'm actually opposed to taking any medication. I'd rather not take them. They are not good for my health.

What is the best way for you (as a physician) to react to this patient's refusal to take the prescribed medication?

- a. Ask her if she knows something else to relieve the pain.
- b. Give her the scientific evidence as to why painkillers will help.
- c. Agree not to take them now but also stress the importance of the physiotherapy.
- d. Tell her that, in her own interest, she will have to start changing her attitude.


Purpose & Context

Admission Exam Medical Studies in Flanders

- ▶ Medical studies = only major with admission exam.
- ▶ Centralized (government-run)
 - Since 1997
 - One day in Brussels (2 sessions per year)
- ▶ Large-scale high-stakes testing
 - > 4000 candidates (18 yrs.)
 - 30% passing rate
 - Medical schools not involved.
 - Students who pass choose their medical university.



Skills measured & tests used

Construct	Measure
<p data-bbox="191 524 743 586">Science knowledge</p> <ul data-bbox="191 618 863 768" style="list-style-type: none"><li data-bbox="191 618 863 680">• Chemistry & physics<li data-bbox="191 712 726 768">• Math & biology	<p data-bbox="1178 524 1619 586">Knowledge test</p> <ul data-bbox="1178 618 1461 680" style="list-style-type: none"><li data-bbox="1178 618 1461 680">• 40 items
<p data-bbox="191 805 957 938">Verbal, numerical, & figural reasoning</p>	<p data-bbox="1178 805 1751 867">Cognitive ability test</p> <ul data-bbox="1178 899 1461 961" style="list-style-type: none"><li data-bbox="1178 899 1461 961">• 50 items
<p data-bbox="191 992 722 1053">Interpersonal skills</p> <ul data-bbox="191 1086 957 1310" style="list-style-type: none"><li data-bbox="191 1086 957 1219">• Building & maintaining relationships<li data-bbox="191 1252 957 1310">• Exchanging information	 A photograph showing two individuals in an office environment. On the left, a woman with dark hair, wearing a white button-down shirt, is seated at a desk and looking towards the right. On the right, a man with dark hair and glasses, wearing a grey sweater, is seated at the same desk, looking at a laptop screen. The desk has some papers and a laptop on it. The background is a plain wall with a plant visible on the left.

Challenges in SJT development

No piloting of items

Logistics & costs

- ▶ From video SJT to written SJT.

Scoring: What is the correct answer?

- ▶ Consensus among experts
- ▶ Model

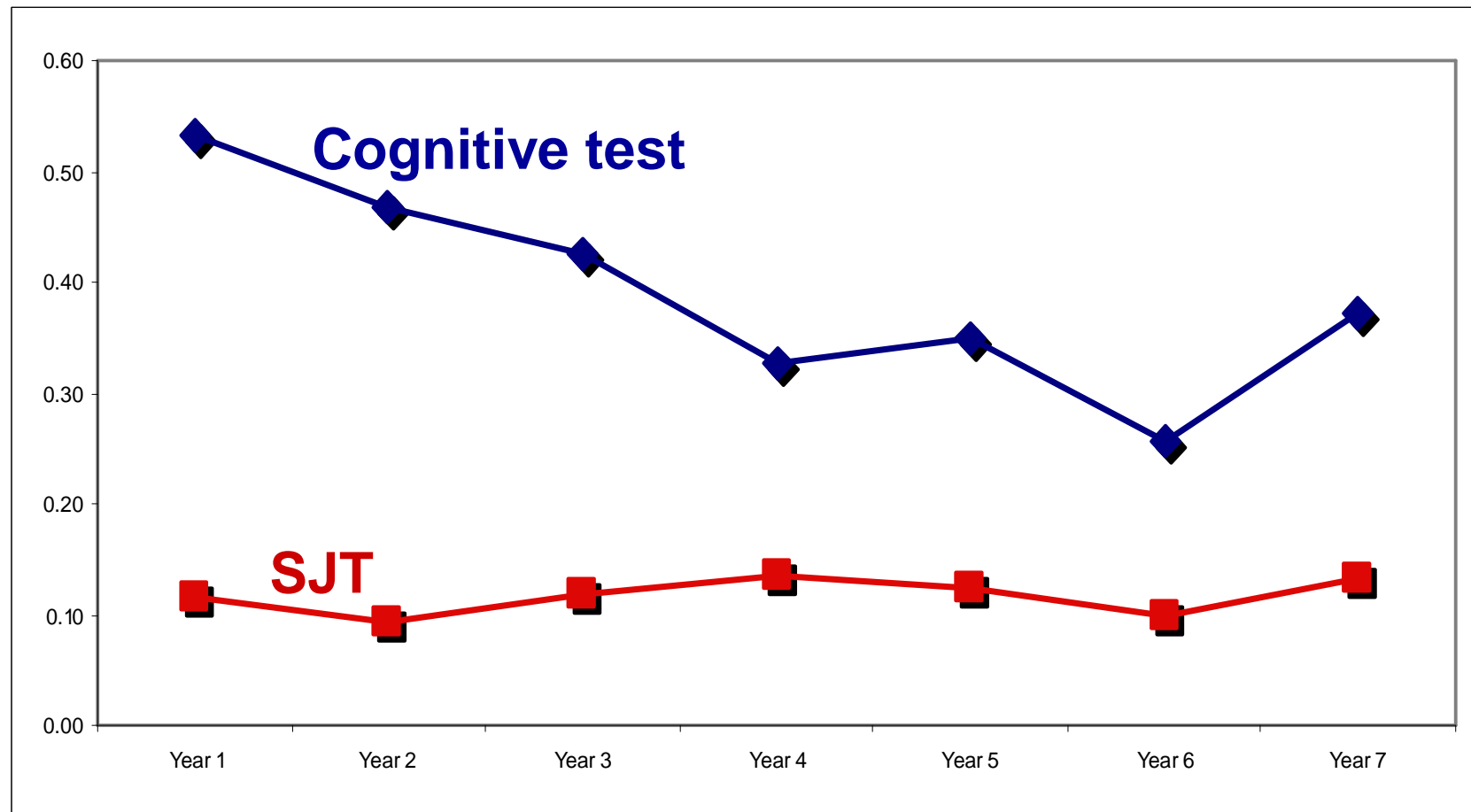
Test preparation

- ▶ Knowledge instruction
- ▶ Creation of alternate forms

Sample

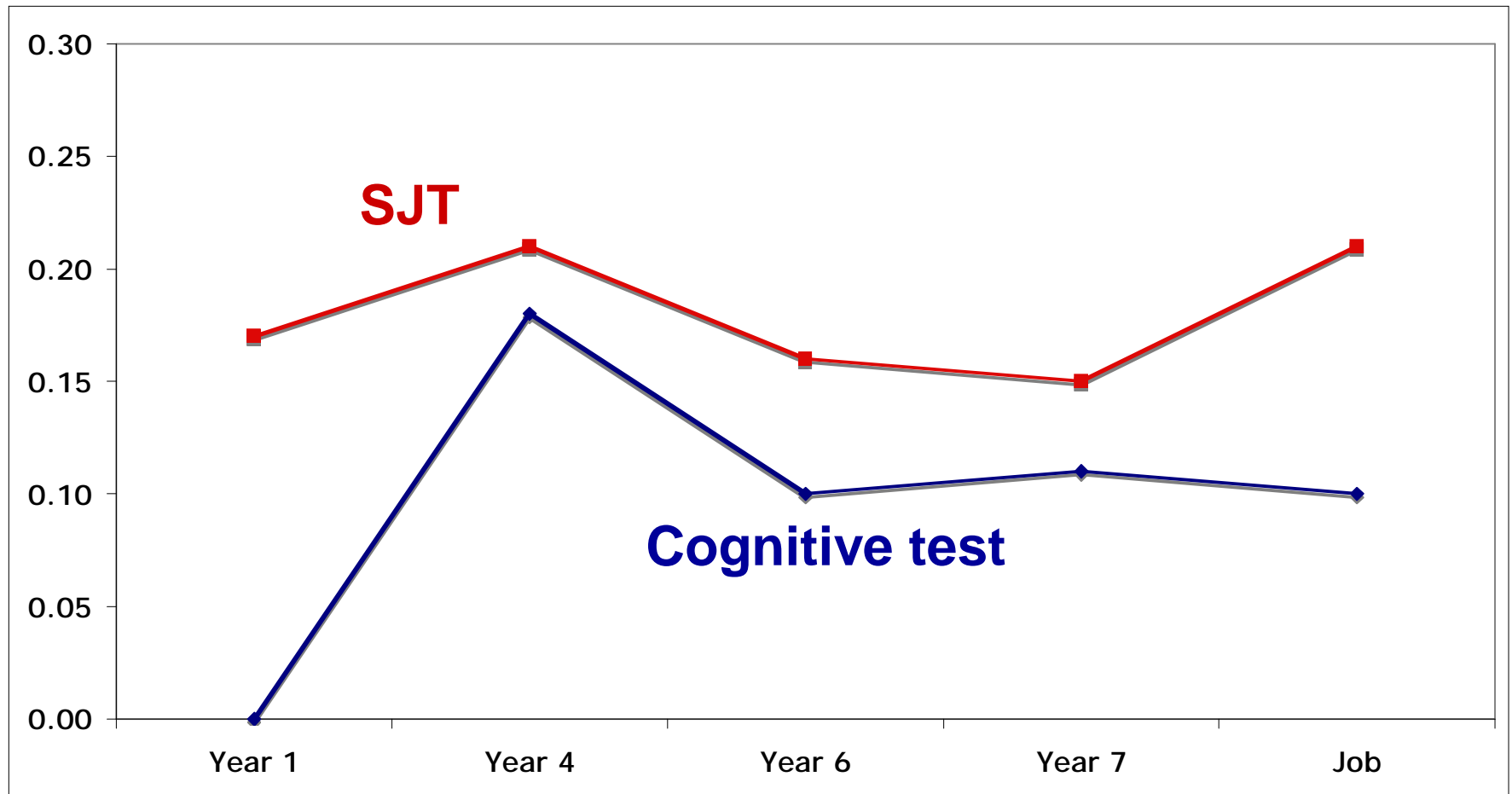
- Four cohorts of medical students in Belgium who participated in the admission exam ($N = 4,538$).
- GPA and internship performance data were available for 519 students who passed the admission exam and completed the full medical curriculum (7 years).
- Job performance data were available for 104 students who chose to become physicians.

Prediction of GPA (7 years)



Note. Correlations corrected for range restriction and unreliability in criterion.

Prediction of Internship & Job Performance



Note. Correlations corrected for range restriction.

Comparability among SJT forms

	<i>d</i> SJT	<i>r</i> SJT	<i>r</i> GMA
<i>Random assignment</i>	-.14	.34	.62
<i>Incident cloning</i>	.67	.56	.70
<i>Item cloning</i>	.27	.68	.67

Implications

Cognitive part is valid for predicting medical grades.

Video-based SJT is valid for predicting internship performance.

Video-based SJT is valid for predicting job performance of physicians.

Video-based SJT has incremental validity over cognitive part.

Women score slightly better on SJT.

Implications (2)

Applicants react most favorably toward the SJT.

Admission exam attracts more candidates.

- ▶ 5% increase per year

Passing rates in universities have increased (up to 80% in first academic year)

Universities have changed their curricula.

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