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The Role of Situational Judgement Test (SJT) in the Medical Student Selection Process

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ABSTRACT

Medicine remains a highly favored study program in university admission selections. This is evident from the percentage of competitiveness for the program at each institution. Student selection is a process of choosing or screening the best candidates. This process is guided by two principles. The first principle is that each individual has unique talents, values, skills, and characteristics, which can determine whether they are a good fit for the profession. The second principle is predicting a candidate's future performance based on their ability to handle specific situations. The selection process in medicine should not only evaluate knowledge but also assess students' affective abilities or attitudes, including professionalism. Professionalism is more challenging to evaluate objectively and efficiently because candidates aware that they are being assessed may respond in the best possible way to appear favorable. However, a test has now been developed that is considered valid and reliable for assessing students' affective abilities, including professionalism: the Situational Judgement Test (SJT). SJT is a test used to evaluate an individual's reactions to various scenarios that reflect relevant situations or conditions likely to be encountered in their future work as doctors. The role of SJT allows institutions to assess how candidates handle specific situations and enables candidates to demonstrate the actual competencies desired by the institution.

Keywords: Situational Judgement Test, Medicine, Student Selection

Introduction

Medicine remains a highly favored study program in university admission selections. This can be observed from the competitiveness percentage of the study programs at various institutions. Competitiveness refers to the percentage of accepted applicants compared to the total number of applicants. The smaller the percentage, the higher the competitiveness of the study program.¹ Student selection is a process of choosing or screening the best candidates. This process is based on two principles. The first principle is that every individual possesses unique talents, values, skills, and characteristics, which can determine whether a candidate is suited to a particular profession. The second principle involves predicting a candidate's future performance based on their ability to handle specific situations.²

Medical student selection requires various processes that not only evaluate knowledge but also assess personal qualities, such as honesty, independence, and responsibility, as outlined in The Edinburgh Declaration. However, many current medical school admissions processes primarily focus on assessing knowledge, while skills and attitudes are equally essential for students to possess during their medical education. These attributes are crucial to ensuring they can provide quality care to patients and serve society effectively.³ The selection process in medical education should not only assess knowledge but also evaluate students' affective skills/attitudes, including professionalism. Professionalism is more challenging to assess objectively and efficiently because candidates aware of being evaluated tend to respond in the best possible way to create a favorable impression. However, there is now a test considered valid and reliable for assessing students' affective abilities, including professionalism, known as the Situational Judgement Test (SJT).⁴ SJT is a test designed to evaluate individuals' reactions to a series of scenarios that reflect situations or conditions likely to be encountered by students in their professional careers as doctors.⁵ The role of the SJT allows institutions to assess candidates' responses to specific situations and enables candidates to demonstrate the actual competencies desired by the institution.⁶

Several studies indicate that the SJT is beneficial for assessing professionalism if it is appropriately designed, as it demonstrates good reliability and validity. A meta-analysis study reported that SJT has strong predictive validity for evaluating individual performance across various fields, including medicine. This is also supported by research conducted at the University of Nottingham on the relationship between SJT scores and the professionalism of medical students during the academic phase. The study found that lower SJT scores were significantly associated with an increased risk of professionalism issues.⁷

Unprofessional behavior is closely linked to decreased patient satisfaction and an increase in ethical violations. One impact is ethical issues on social media due to breaches of patient privacy, unclear doctor-patient relationships, and damage to the profession's reputation caused by unprofessional conduct by a doctor.⁸ Therefore, it is crucial for medical institutions to detect candidates at risk of professionalism violations early through the student selection process.

2. Definition of Situational Judgement Test (SJT)

The Situational Judgement Test (SJT) is used to assess a candidate's reactions to various situations that closely resemble real-life scenarios they may encounter in their future profession. Candidates are asked to provide responses based on what they would do or how they would act in those situations.⁹ SJT serves as a measurement tool and is not used as the sole method in the selection process. As a result, SJT is often combined with knowledge-based tests, and its format can be adjusted according to the specifications of the desired test.¹⁰ Various response formats, such as ordering actions, ranking choices, or selecting the best and/or worst response, are used depending on the context or the level of education where the SJT is applied. Candidate responses are evaluated against answer keys predetermined by experts, including clinicians, ensuring that the assessment is standardized.¹¹

The use of the Situational Judgement Test (SJT) has been implemented in the selection and assessment processes of medical schools in recent years. Typically, SJTs involve written scenarios or hypothetical situations presented in video format. Candidates are then asked to report their responses to the situations described in the scenarios. Non-cognitive aspects or professional attributes, such as communication, integrity, empathy, and teamwork, essential qualities for a doctor can be effectively assessed through SJT.⁷

3. The Utilization of SJT in the Selection Process

The Situational Judgement Test (SJT) is often employed as a screening tool during medical school selection processes because it can assess non-academic abilities—such as organizational involvement, leadership, and other interpersonal skills—in a standardized and cost-effective manner. Candidates who complete the SJT typically progress to the next stages of the selection process, such as structured interviews. SJT can also be effectively integrated into the interview stage, complementing other evaluation methods. This combined approach ensures a more comprehensive assessment of candidates by using multiple selection techniques.¹²

The use of the Situational Judgement Test (SJT) in selecting healthcare students has become increasingly widespread globally, including its application in undergraduate student selection in Belgium, Singapore, and Canada, as well as in postgraduate medical student selection in Australia. A literature review study suggests that SJT can be utilized to assess ethical competencies at the "knows how" level before advancing to the "does" level. This is because SJT can incorporate questions with conative content, allowing for the evaluation of decision-making abilities in ethical dilemmas. It assesses procedural knowledge and ethical reasoning in making decisions when faced with ethical challenges.¹³

4. Development of SJT

The creation of a Situational Judgement Test (SJT) involves a comprehensive and systematic process to ensure its relevance to the targeted role and fairness for all candidates. Below are the key steps in developing an SJT:

1. Job Analysis and Test Specification

This step begins with analyzing the role and determining test specifications. Job analysis focuses on identifying behaviors and attitudes required for specific situations, such as decision-making, responsibility, and independence. The goal is to evaluate candidates' attitudes to ensure competent performance in real-world scenarios.¹⁴

- **Data Collection:** This involves interviewing stakeholders, including doctors, workplace leaders, and patients, and gathering examples of real-life incidents from everyday medical practice.
- **Targeted Professionalism Components:** Five key components often identified are:
 - Commitment to professionalism
 - Managing pressure effectively
 - Effective communication
 - Prioritizing patient health and safety
 - Team collaboration

The gathered information informs the test specifications, detailing the content, question types, response formats (e.g., multiple choice, ranking, best/worst ratings), test delivery method, test length, and scoring system.¹⁵

2. Question Creation and Initial Review

Once the role analysis and test specifications are established, scenarios and responses are developed. These are reviewed with stakeholders and subject matter experts (SMEs), such as supervisors and clinicians. **Expert Review:** Questions undergo thorough and systematic review by experts to ensure they are fair, role-relevant, and realistic.¹⁴

3. Scoring Key Development

After developing the test items, a scoring key is created through consensus among SMEs. **Scoring Methods:**

- Ranking responses from most appropriate to least appropriate
- Independent evaluation of each response

This iterative process ensures agreement on final scoring criteria.¹⁴

4. Test Construction

The test is built based on the approved scenarios and response formats. SJTs can be delivered as:

- **Written scenarios** (computer-based)
- **Video-based formats** or other interactive methods

5. Piloting

The completed SJT is piloted to assess its fairness and effectiveness in measuring the desired attributes.

- **Sample Group Testing:** Testing is conducted on a group with characteristics similar to the target audience. For example, if the SJT is for medical student selection, first-year medical students may be used for piloting.
- **Feedback Collection:** Pilot participants provide feedback on the fairness and relevance of the test content.¹⁵

6. Psychometric Analysis and Quality Assurance

Psychometric analysis ensures the test's reliability and validity, evaluating whether:

- Each question assesses the intended attributes
- The test is free of bias toward specific demographics (e.g., ethnicity or race). This analysis helps determine whether problematic scenarios should be revised or excluded.¹⁵

7. Item Bank Creation

A final bank of validated and reliable test items is created. This step ensures the continuous quality of the test and aligns questions with the intended objectives. This rigorous development process ensures that SJT is a fair, reliable, and effective tool for assessing candidates' non-cognitive skills and professional attributes.¹⁵

5. Characteristic of SJT Scenarios and Responses

The **Situational Judgement Test (SJT)** consists of two main components: the question body (scenario) and the response options.

a. Question Body (Scenario)

The scenario presents incidents or situations that candidates might encounter in real-life contexts. These scenarios can be delivered in written text or video formats. The key characteristics of SJT scenarios are as follows:¹⁶

1. **Critical Incidents:**
 - Scenarios should depict critical incidents to make them more realistic.
 - These incidents are typically identified using the critical incident technique, which involves gathering content from archival records or interviews with subject matter experts (SMEs).
 - Examples of critical incidents include managing workplace stress, solving problems creatively, and handling unpredictable situations.¹⁵
2. **Specificity:**
 - Scenarios that are more specific tend to provide higher validity as they reduce assumptions made by candidates.
3. **Avoid Over-Simplification:**
 - Scenarios should not be overly simplistic, where only one response is clearly reasonable.
4. **Sensitivity and Inclusivity:**
 - Avoid scenarios that could be sensitive or offensive to any group.
 - Ensure diversity in characters, maintain gender balance, and use neutral tones so scenarios are applicable to all groups or ethnicities.

5. Avoid Over-Complexity:

- Scenarios should not be overly complex or include excessive information that might confuse candidates or make the intent of the scenario unclear.

b. Response Options

SJT responses can take various forms, including:

1. Ranking:

- Candidates rank the actions from most to least appropriate or effective.

2. Single-Choice Selection:

- Candidates choose the single most appropriate response to the situation described.

Key Considerations for Responses:

- Responses should not be overly simple, where only one answer is obviously correct. This prevents candidates from easily guessing the “right” answer.
- Scenarios may ask candidates:
 - **"What should you do?"**
 - This evaluates the candidate's knowledge or ability to handle challenging situations effectively.
 - **"What would you do?"**
 - This assesses the candidate's behavioral tendencies or likely actions.¹⁶

There are three basic approaches to determining answers for the SJT, including:

- **Empirical Approach:** This involves collaboration between the test development team and experts in the relevant field. When items are empirically scored, they are selected and weighted based on evidence of their ability to differentiate individuals who score highly at different levels.
- **Theoretical Approach:** This involves assessments conducted by a consensus panel, which also includes experts in the relevant field.
- **Rational Approach:** This involves the review and analysis of pilot test data.¹⁶

6. Advantages and Disadvantages of SJT

a. Advantages of SJT

SJT is one of the processes that can be used in selection if designed properly, as it has good reliability and validity. The cost of administering the test is lower because it can be done online, making the test scheduling more flexible and candidates do not have to be at the test location. The scenarios created can be tailored to specific situations, allowing assessment of how candidates would act when faced with those situations. This can be adjusted to the institution's needs to evaluate or select the best candidates according to what the institution requires.¹⁵

b. Disadvantages of SJT

SJT is still not widely used in various institutions, especially in Indonesia, because it requires expertise in test design. Not only the test development team but also subject matter experts need to choose the best response answers and align them with the situations faced. Indonesia also has diverse cultures, which can lead to cultural biases, one of which is language bias. Indonesia has various regional languages, so if scenarios are written in a language not commonly used, candidates from certain cultures or regions may not understand the scenario's meaning, leading to misunderstandings. Test developers and experts should consider the cultural differences of students when determining the most appropriate response options.^{15,16}

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