

2017.1.7 東京医科歯科大学FD

日本や世界の医学部入試の傾向

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目的と話題

医学部(医学科)の入試について多角的に紹介



ディスカッションの参考に

- ▶前半: 選抜方法の特性を検討する観点
- ▶後半: 医学部入試の国際比較

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選抜方法の特性を検討する観点 (1)

妥当性 Validity

- ▶ 目的に合った方法で選抜しているか
- ▶ 将来医師になる適性を備えている者を選ぶ目的ならば, その適性を測定しているか

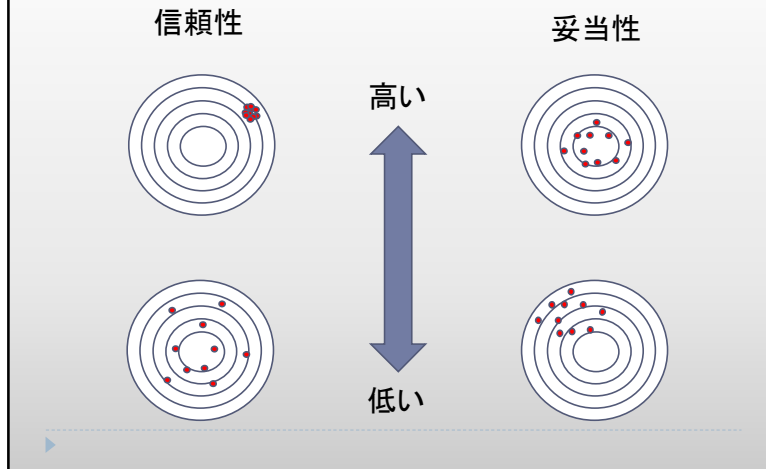
信頼性 Reliability

- ▶ 測定の結果がぶれずに常に同様の選抜ができるか
- ▶ MCQ形式のペーパーテストは信頼性が高い

A Practical Guide for Medical Teachers (3rd ed.) pp 371-377, 2009

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信頼性と妥当性のイメージ



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選抜方法の特性を検討する観点 (2)

実現可能性 Feasibility

- ▶ 限られた時間や経費や人員で実際の選抜を実施できるか

容認可能性 Acceptability

- ▶ 志願者を含む関係者や一般社会が選抜方法を納得できるか

A Practical Guide for Medical Teachers (3rd ed.) pp 371-377, 2009

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実現可能性

大学入学者選抜実施要項

- ▶ アドミッション・オフィスを設置



総合的な入学者選抜を推奨

出典：平成28年度大学入学者選抜実施要項
(平成27年5月27日付け27文科高第261号文部科学省高等教育局長通知)

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容認可能性

日本の大学入試

- ▶ 各大学が作成した(独自の傾向を持つ)ペーパーテストで大勢の受験生が同時に同じ問題に解答



その点数で合否を判定するという方法の明快さ

「一発勝負の公平性」として尊重する意見も

しかし妥当性や信頼性の検証は外部からは困難



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海外では様々な医学部入試が

医学教育研究のレビューから

- ▶ Aptitude Tests 適性試験
- ▶ Academic Records 学業成績
- ▶ Personal statements, essays and autobiographical submissions
自己紹介文, 小論文, 経歴
- ▶ References 推薦状
- ▶ Situational Judgement Tests (SJTs) 状況判断試験
- ▶ Personality assessment and Emotional Intelligence
性格検査と感情的知性
- ▶ Interviews and Mini-multiple interviews (MMIs)
面接試験とMMI
- ▶ Selection centers セレクションセンター

▶ Research Report. Identifying best practice in the selection of medical students (literature review and interview survey). GMC 2012.

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レビューの結果から

- ▶ Aptitude tests 適性試験 ▲
- ▶ Academic records 学業成績 ▲
- ▶ Personal statements, essays and autobiographical submissions
自己紹介文, 小論文, 経歴 ▲ ~ ✕
- ▶ References 推薦状 ✕
- ▶ Situational Judgement Tests (SJTs) 状況判断試験 ○
- ▶ Personality assessment and Emotional Intelligence (EI) ?
性格検査と感情的知性
- ▶ Interviews and Mini-multiple interviews (MMIs) ▲ ~ ○
面接試験とMMI
- ▶ Selection centers セレクションセンター ▲

▶ Research Report. Identifying best practice in the selection of medical students (literature review and interview survey). GMC 2012.

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Situational Judgement Tests (SJTs)の例

Ask to choose the most effective and the least effective responses from a list of five.

Everyone in your department has received a new computer system except for you.
What would you do?

Please choose the most effective and the least effective responses:

- A - Assume this is a mistake and speak to your manager.
- B - Confront your manager regarding why you are being treated unfairly.
- C - Take a new computer from one of your colleagues.
- D - Complain to the Human Resources department.
- E - Quit.

Situational Judgement Test: Wikijob
<https://www.wikijob.co.uk/content/aptitude-tests/test-types/situational-judgement-test>

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Situational Judgement Tests (SJTs)の例

Ask to rank the available responses from most effective to least in number order.

You are aware that large amounts of company property have been going missing over the past couple of weeks. You have noticed one of your colleagues putting stationery and other equipment from the office into her bag on a number of occasions and suspect that she is responsible.
What is your response to the situation?

Rank the following options in number order from the least effective to most effective response, with (5) being the least effective and (1) being the most effective.

- A - Gather more evidence and catch her red-handed.
- B - Confront your colleague and ask her about what you have noticed.
- C - Inform your manager that you suspect your colleague is stealing.
- D - Don't do anything. If guilty your colleague will be caught.
- E - Privately ask some of your colleagues if they have noticed anything suspicious recently.

Situational Judgement Test: Wikijob
<https://www.wikijob.co.uk/content/aptitude-tests/test-types/situational-judgement-test>

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Situational Judgement Tests (SJTs)の例

Ask to choose only the most effective response from a list of four.

At the end of a busy day at work, you accidentally send an e-mail containing an attachment with some confidential client information to the wrong person.
Which of the following would be the best thing to do?

- A - Decide to leave the office and deal with any problems tomorrow.
- B - Decide to overlook your error, send the e-mail to the correct person and leave things like that.
- C - Immediately send a follow up email to the "wrong" person, or if possible telephone them explaining your mistake. Then send the email to the correct person.
- D - Find your manager, explain what has happened to them and let them deal with any problems.

Situational Judgement Test: Wikijob
<https://www.wikijob.co.uk/content/aptitude-tests/test-types/situational-judgement-test>

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Situational Judgement Tests (SJTs)の例

You are reviewing a routine drug chart for a patient with rheumatoid arthritis during an overnight shift. You notice that your consultant has inappropriately prescribed methotrexate 7.5mg daily instead of weekly.

Rank in order the following actions in response to this situation (1= Most appropriate; 5= Least appropriate)

- A Ask the nurses if the consultant has made any other drug errors recently
- B Correct the prescription to 7.5mg weekly
- C Leave the prescription unchanged until the consultant ward round the following morning
- D Phone the consultant at home to ask about changing the prescription
- E Inform the patient of the error

▶ Research Report. Identifying best practice in the selection of medical students (literature review and interview survey). GMC 2012.

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SJTへの準備

BMJ OnExamination

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SJT

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SJTへの懸念と現状

- ▶ **容認可能性 Acceptability**
志願者を含む関係者や一般社会がSJTという選抜方法を納得できるか？
- ▶ **受験対策の影響**
受験予備校などで模擬試験や予想問題で準備したほうが有利になるのでは？

Situational judgement tests in medical education and training 2016
AMEE Guide No100.

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SJTへの懸念と現状

- ▶ **容認可能性 Acceptability**
志願者を含む関係者や一般社会がSJTという選抜方法を納得できるか？
← これまでのところは問題なし
- ▶ **受験対策の影響**
受験予備校などで模擬試験や予想問題で準備したほうが有利になるのでは？
← ある程度の影響あるも対策により減らせる

Situational judgement tests in medical education and training 2016
AMEE Guide No100.

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Mini-multiple interviews (MMIs)の出題領域

McMaster	Canberra	Calgary	Israel	Dundee
Eva et al.	Harris and Owen	Lemay et al.	Gafni et al.	Dowell et al.
Communication	Interpersonal skills	Empathy	Communication	Communication
Critical thinking	Giving Instructions	Advocacy	Handling stress	Critical thinking
Ethical decision making	Taking instructions	Ambiguity	Initiative and responsibility	Integrity
Knowledge of health care system	Problem solving	Collegiality	Self-awareness / maturity	Moral reasoning
	Ethics	Cultural sensitivity		Preparation + motivation
	Resilience/maturity	Ethics		Teamwork
	Enthusiasm	Integrity		
	Awareness of issues in medicine	Responsibility		
		Self - assessment		

Research Report. Identifying best practice in the selection of medical students (literature review and interview survey). GMC 2012.

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別のレビューでは

- ▶ There is evidence of the predictive validity of Medical College Admission Test (MCAT) for medical school and licensing examination performance. MCATは医学部および医師国家試験の成績に対する予測妥当性の根拠あり
- ▶ Interviews have not been shown to be robust selection measures. 面接は選抜方法として不安定
- ▶ Studies of multiple mini-interviews have indicated good predictive validity and reliability.
MMIは予測妥当性と信頼性に優れる

Assessment for selection for the health care professions and specialty training: consensus statement and recommendations from the Ottawa 2010 conference. Med Teach. 2011;33(3):215-23.

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別のレビューでは

- ▶ Widening access to medical and health professional programmes is an increasing priority and relates to the social accountability mandate of medical and health professional schools. 専門職への門戸を拡大することの重要性は増しており社会に対する説明責任とも関連する
- ▶ While traditional selection measures do discriminate against various population groups, there is little evidence on the effect of non-traditional measures in widening access.
従来の試験は多様な集団を差別しているが新たな方法で改善できるという証拠はない

Assessment for selection for the health care professions and specialty training: consensus statement and recommendations from the Ottawa 2010 conference. Med Teach. 2011;33(3):215-23.

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最新のレビューでは

従来の選抜方法(面接, 推薦状, 自己紹介文)より効果的で公正

- ▶ Academic Records 学業成績
- ▶ Mini-multiple interviews (MMIs)
- ▶ Aptitude Tests 適性試験
- ▶ Situational Judgement Tests (SJTs) 状況判断試験
- ▶ Selection centers セレクションセンター

研究の質に懸念

横断研究(cross-sectional study)のデザインに依存しすぎ
妥当性より信頼性に焦点を当てる傾向強い

How effective are selection methods in medical education? A systematic review 2016 Med Educ.

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妥当性重視 vs 信頼性重視

医学教育における評価

- ▶ 先進的な国のひとつが英国

↑
信頼性よりも妥当性を重視

例: 統一的なペーパーテストの医師国家試験はない

卒業試験: 実技試験を含む多様な内容

それに代わるもの: 医学部に対する外部からのチェック

- ▶ 日本は信頼性を重視する傾向

↑
受験者間の差を明示することの魅力

説明責任を(表面的にはわかりやすく)果たせる

妥当性検討の壁

- ▶ 落ちた人との比較が困難
- ▶ アウトカムを測定しにくい

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国際シンポジウム「医学部入試の課題と改革」



▶ 2013.10.26 国際シンポジウム「医学部入試の課題と改革」

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プログラムの概要

- ▶ 世界の医学部入試の状況と国際的な課題
クラレンス・クライター アイオワ大
- ▶ 日本の医学部入試の現状と課題
大滝純司 北海道大学
- ▶ 格差社会における医学部入試—ロンドン大キングス・カレッジの試み
武田裕子 ハーバード大ベイスイスラエル・ディーコネス病院
- ▶ 英国全体とロンドン大セントジョージ校の医学部入試の状況
ピーター・マクローリー ロンドン大学セントジョージ校
- ▶ 台湾における医学生選抜の概略
ライ・チー・ワン 台湾医学認証評価協会会長
- ▶ マギル大学(カナダ)の医学生選抜, その新手法
ジョイス・ピカリング マギル大学医学部

▶ 2013.10.26 国際シンポジウム「医学部入試の課題と改革」

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世界の医学部入試の状況と国際的な課題 クラレンス・クライター教授 アイオワ大

医学部入試を国際的な視野で概説

- ▶ 医学部入試の方法や入学志願者の層は多様
- ▶ その妥当性に関する論点はほぼ同様
- ▶ 一般的知能以外の測定は妥当性に関する根拠が不十分
- ▶ メタ分析により一般化可能で国際的に通用する知見
- ▶ 知的能力に優れた志願者を選び出すことを重視
- ▶ 入試が目的に適切であることを測定できていない
- ▶ 学業成績より適正試験を重視⇒教育歴や社会背景による差を狭められる
- ▶ すべての入試は一般的知能に相関
- ▶ 一般的知能は専門職アウトカムの予測につながるだろう

▶ 2013.10.26 国際シンポジウム「医学部入試の課題と改革」

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OBSERVATIONS

Constructing a More Comprehensive Validity Argument for Medical School Admission Testing: Predicting Long-Term Outcomes

Clarence D. Kreiter

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Junji Otaki

Center for Medical Education, Graduate School of Medicine, Hokkaido University, Sapporo, Hokkaido, Japan

Issue: The research published outside of medical education journals provides an important source of validity evidence for using cognitive ability testing in medical school admissions. *Evidence:* The cumulative body of validity research, consisting of thousands of studies and scores of meta-analyses, has conclusively demonstrated that a strong positive relationship exists between job performance and general mental ability. *Implications:* Recommendations for reducing the emphasis on or eliminating the role of general mental ability in the selection process for medical schools are not based on a consideration of the wider research evidence. Admission interventions that substantially reduce the level of academic aptitude are also likely to result in reduced professional performance.

Keywords: MCAT, validity, admissions

journals, the meta-analytic insights discussed here are possible only through a cross-disciplinary survey of the validity evidence.

BACKGROUND

In the United States, there have been many calls to reduce the emphasis on admission test scores and cognitive ability measures used during the selection process. Perhaps the most public of these calls took place when Dr. Jordan Cohen, then president of the Association of American Medical Colleges (AAMC), suggested that medical schools use Medical College Admission Test (MCAT) scores only as a lower threshold for eliminating high-risk applicants.¹ To achieve this, he recom-

Teaching and Learning in Medicine 27(2):197-200

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マギル大学(カナダ)の医学生選抜, その新手法 ジョイス・ピカリング マギル大学医学部

過去の入試と問題点

- ▶ 知識面の能力: GPAとMCAT (Med. College Adm. Test)
 - ▶ 基礎医学領域の成績に相関するが、臨床医学との相関はない
- ▶ 知識面以外の能力: 志望理由の手紙、推薦状、面接

Multiple mini interviews (MMIs)の開発と導入

- ▶ 知識面以外の能力を診る: McMaster大を参考に
 - ▶ 例: 障害者の指導 / 急な荷造り / 母の違法行為へ対応

MMIを入試に導入した結果

- ▶ M1-M4の成績との相関: **GPA + MMIs > GPA単独**
 - ▶ M1, M2, M1-M4の成績: 入学前4年間の GPAと正相関
 - ▶ **M3クリックラ**: GPAと無相関 / 面接と負相関 / **MMIsと正相関**
- ▶ **従来面接試験を止めMMIs単独に**
 - ▶ 面接は意味が無いか逆効果 ⇔ **MMIsは臨床能力を予測**

▶ 2013.10.26 国際シンポジウム「医学部入試の課題と改革」

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日本の医学部入試の現状と課題 大滝純司 北海道大学

現状の確認

- ▶ 医学部入試の学力試験では**受験学力を測定**
- ▶ 受験学力のみの入学者選抜には改善勧告
- ▶ 面接や活動歴などを重視する評価や推薦入試が導入
- ▶ **入学後脱落しないためには相当の学力が必要**
- ▶ **受験学力が日本の医学部入試の尺度の中心**
- ▶ **高度な受験学力を測定することの妥当性**
 - ▶ 「地域枠」が政策的に導入
 - ▶ 入試合格者に一律の**受験学力を求めることは妥当か**
- ▶ **教育格差の影響**
 - ▶ **裕福な家庭の出身者**
 - ▶ **進学校の多い都会の出身者** が医学部入学に**有利に**

▶ 2013.10.26 国際シンポジウム「医学部入試の課題と改革」

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まとめ

医学部入試の方法

- ▶ ペーパーテスト以外の方法も盛んに開発
- ▶ 海外でも妥当性を検討した研究報告は少ない
- ▶ 目的にかなわないような方法での能力測定と判定を

研究の必要性

- ▶ **社会格差や国際化の波の中でさらに重要に**

▶

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