Short Communications:

Selection 2 – Multi Mini Interview

Location: Argyll III, Crowne Plaza

When interviewers meet to discuss their MMI scores: an ethnography of decision making

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Background: Within an assessment centre to determine entry into specialty postgraduate training, interviewers met to discuss candidates’ performances following each circuit of a multiple mini interview (MMI). We explored interviewers’ talk about their judgments.

Summary of Work: We used ethnography from the perspective of rater cognition theories to explore the social phenomena of an interviewer meeting in which they discussed how they had made their own judgments on candidates, explored the judgements of other interviewers, and evaluated their own judgment-based decisions.

Summary of Results: Interviewers readily socialize into the expected behaviours set by the organizing institution. They tend to make decisions on gut feelings most of the time but are more analytical in complex cases. They readily acknowledge that judgments can be flawed, and find training around principles of bias helpful. They express a need to judge capability for growth in candidates. In making their decisions, they are most informed by their own experience as a professional, the outcomes of their previous decisions, and their shared understanding of the expected behaviours of the candidates.

Discussion and Conclusions: An ethnography of MMI interviewers gives rich insights into judgment-based decision-making. Interviewers are highly expert and often constrained in making good judgments by the limitations of the tools that they have at their disposal. Take-home messages: Understanding how interviewers make decisions in the MMI could improve the design of marking rubrics and interviewer training, and lead to more precise decisions in the MMI.

The Modified Personal Interview (MPI) for MD Admissions: Blending Reliability and Recruitment

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Background: In 2013/14, the University of Toronto MD program implemented the Modified Personal Interview (MPI) to improve inter-interview reliability yet maintain applicant recruitment and high applicant acceptances yield. We report MPI implementation outcomes.

Summary of Work: MPI integrates multiple independent sampling (MIS) with recruitment approaches. For instance, the MPI circuit comprises 4 independent 12-minute interviews; only 4 interviews of longer duration to promote rater/applicant personal contact and recruitment. We analyzed MPI scores for inter-interview reliability and a D study. Admissions yields (total final applicant accepts/offers) were calculated across the pre: MPI cycle and the MPI cycle to monitor recruitment.

Summary of Results: 600 applicants were interviewed across 7 days by 160 interviewers. MPI inter-interview reliability is 0.56 with no differences between faculty, resident and student raters or between interview constructs in terms of measurement properties. D study indicates to achieve reliability of 0.7 requires 8 interviews. The MPI cycle admissions yield was 79% compared to 78% for pre: MPI cycle. Rater feedback supports MPI acceptability.

Discussion and Conclusions: MPI implementation was successful with rater acceptability, reliability of 0.56 and maintenance of admission yield. D study indicates to achieve reliability of 0.7 requires 8 interviews. The MPI represents an implementation “compromise” that advances integrated MIS-based interviewing and applicant recruitment strategies. High reliability (0.7-0.9) is a desirable goal yet is not the sole marker of assessment success. For our institution, recruitment is also a successful marker of assessment. Take home messages: Incorporating assessment “compromise” approaches enhances rigour while meeting multiple institutional goals.
Using Multiple Mini Interview in an internationally diverse medical student population

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Background: International medical students account for a growing proportion of medical students worldwide. The aims of this study were to run a MMI in an internationally diverse student population to establish its a) Fairness with respect to age, gender, socioeconomic group, candidate background and b) Predictive validity c) Stakeholder acceptability

Summary of Work: A mixed methods, explanatory sequential design was used. Participants were newly enrolled First Year students. Quantitative data comprised: demographics, other selection tool scores, MMI scores and First Year results. Qualitative data were generated from focus group with two MMI Assessor groups and two student groups.

Summary of Results: N= 109; 41% (n=45) Non-EU; 36% (n=39) did not have English as first language. MMI Cronbach’s Alpha 0.78. MMI Scores were not impacted by age, gender or socioeconomic group. Non-EU students and those without English as first language achieved lower MMI scores (p<0.001). MMI predicted EU, but not Non-EU student OSCE performance (r=0.27; p=0.03; n=64). Two themes emerged: Authenticity and Cultural Awareness. MMI offered deep “insight into how you cope and handle things” (Non-EU student). Cultural specificity and English language proficiency were perceived to disadvantage international students.

Discussion and Conclusions: Fairness and acceptability of MMI can be influenced by evidence/perceptions of equal opportunity, equity of outcome, test relevance to future practice and test characteristics including nuances of language and culture. Recommendations for improvement to MMI for international students include assessor cultural awareness training, developing culturally neutral stations and lengthening station duration to accommodate non-native English speakers.

Take-home messages: Responding to these recommendations may help ensure the fairness and acceptability of MMI.

An Admissions Experience in Pakistan: The Multiple Mini-Interview

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Background: One of the greatest challenges continuing to face medical educators is the development of an admissions protocol that provides valid information pertaining to the non-cognitive qualities candidates possess. The Multiple Mini-Interview is increasingly recognized as better compared to conventional admission interviews. This study reports the experience of using MMI to select undergraduate students in a medical college in Pakistan.

Summary of Work: MMI consisting of 10 short objective structured clinical examination (OSCE)-style stations was conducted in the Shalamar Medical College, Lahore, Pakistan. Participants were presented with scenarios that required them to discuss health and ethics related issues with an interviewer, interact with a standardized confederate while an examiner observed the interpersonal skills displayed, or answer traditional interview questions. Generalizability Theory was used to determine the reliability of the MMI. Participants completed post-MMI questionnaires.

Summary of Results: A total of 340 out of 450 (75.55%) candidates participated in the study. The overall test reliability was found to be 0.78. Stakeholders acceptance was good, both interviewers and candidates were positive about their experiences, with 75 percent of candidates and 95 percent of assessors preferring MMI over traditional interviews.

Discussion and Conclusions: MMI allows multiple samples of insights into a candidate’s ability and minimizes the effects of chance and examiners’ bias. It is a useful protocol for assessing non-cognitive variables such as interpersonal skills and professionalism. Individual institutions can tailor the stations towards selection of the characteristics that are most valued within their local context.

Take-home messages: MMI is a reliable, feasible and acceptable protocol for students’ selection in medical colleges.
Is adding actors’ score providing any gain in the multiple mini-interviews (MMI) process for medical admission?

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Background: MMI are a valid interview process tested in many situations by medical schools in the last decade. MMI evaluate the non-cognitive attributes which is a major challenge as selecting suitable medical students is paramount. In Québec, the three francophone medical school work together evaluating around 1,500 applicants on the same two weekend’s days.

Summary of Work: The Québec MMI is composed of twelve 7-minutes stations, 6 of them role playing-based and 6 discussion-based. In the former type, we ask actors to rate independently the candidates without any prior training. Raters are faculties, resident trainees or community members. Those raters and actors use the same 6 anchors categories rating scale. Correlation analysis and G study were used.

Summary of Results: Concordance between ratings are moderate for stations (ICC ranging from 0.43 to 0.56) and good for global score (ICC=0.68). There are clearly common and unique aspects in raters and actors appreciations. Using mean ratings on the 6 stations, results in decision change for 17% of candidates. Half would be higher than the passing score and vice-versa.

Discussion and Conclusions: It could be interpreted that actor perceive some other aspects of applicants as they are in direct interaction with them. On validity ground, actors’ score could be valuable to better select the medical applicants but this add another load on the organisation and challenge the cost-benefit of this new input.

Take-home messages: Actors could give new genuine information on applicants’ non-cognitive attributes; actors’ rating could be valuable in MMI; adding new input in the MMI assure a better applicants’ evaluation.

Correlation of the Multiple Mini Interview and Empathy

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Background: Empathy has been emphasized by the LCME and AAMC as a desired trait by US medical schools in the student selection process. Empathy has multiple definitions, but has been described as the ability to feel compassion and concern for others. The Multiple Mini Interview (MMI) has been investigated for correlations with other measures such as personality, emotional intelligence, and career development. The MMI was created using scenarios to measure desirable traits. However, given the lack of research in the area of the correlation between the MMI and empathy this study was conducted.

Summary of Work: The Jefferson Empathy Student Scale (JSPE-S) was given to entering students (69% response rate) during orientation at one US Midwestern medical school in the fall of 2011. The students completed the MMI as part of the admissions selection process. During the interviewer training for the MMI, interviewers/raters were told to include empathy in their assessment. IRB approval was obtained (IRB #11-07-19-02).

Summary of Results: A significant positive correlation (p<.01) existed between the MMI and the following subscales: Importance, Feelings, Perspective Taking, and the overall Total Empathy score. No significant correlation was noted for the subscale Ease.

Discussion and Conclusions: A correlation exists between the MMI and empathy. Further research should exam if specific MMI scenarios are more predictive of empathy.

Take-home messages: While this study used the JSPE-S to measure empathy, the significant correlation between MMI and empathy suggests that the MMI may be used to assess empathy during the medical school admissions selection process.
Selecting medical students, predictive validity of multiple mini-interviews and the UKCAT

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Background: Non-knowledge based testing is becoming increasingly prominent in the UK medical school selection process. Accumulating evidence for the predictive validity of multiple mini-interviews (MMIs) is encouraging, while evidence for the UK Clinical Aptitude Test (UKCAT) would appear to be less consistent.

Summary of Work: Scores from the 2012 and 2013 MMI cohorts at Queens University Belfast (199 and 235 applicants respectively) were compared to performance in written exams (global performance and MCQs considered separately) in the first and second years as applicable. UKCAT scores were similarly matched.

Summary of Results: Factor analysis of individual written exams and OSCEs showed that there are two separate components contributing to variance, accounted for respectively by written exam and OSCE results. Pearson's product moment correlations were significant when MMI score was compared to OSCE performance less so or not significant for written exams. UKCAT scores were correlated significantly with written exams, most strongly with MCQs whereas there was no correlation with OSCE results.

Discussion and Conclusions: Factor analysis could be reflecting different attributes being measured by MMIs versus OSCEs. The results confirm previously reported data which support the predictive validity of MMIs, particularly in OSCE performance. On the other hand there was no correlation between UKCAT score and OSCE score, which rather was significantly correlated with MCQ components of written exams.

Take-home messages: This study adds to the body of evidence supporting the predictive validity of MMIs in the early stages of medical education. In addition it suggests a complementary role for the UKCAT. Planned follow-up of this cohort extending into clinical training and beyond is important to examine how the relationship between admission scores and medical school performance evolves.