Title: Medical school screening tools: how far do Medical Aptitude tests and personality measures predict performances throughout preclinical years?

Authors: Milena Abbiati, University of Geneva Medical School, Geneva; Zoya Horcik, University of Geneva Medical School, Geneva; Anne Baroffio, University of Geneva Medical School, Geneva
Presenter: Milena Abbiati, University of Geneva Medical School, CMU, Geneva, 1200, Switzerland

Abstract Text:
Background:
The development of screening tools predicting further academic and professional performance is still an unresolved issue. To date, Medical College Aptitude Tests (MCAT) and Grade-Point-Average are the best predictors of performance during medical school, along with, to a lesser extent, some personality measures (e.g. Conscientiousness). Findings are still however controversial about the evolution of predictive validity of these measures, notably personality, throughout preclinical years and further research is needed.

Summary of work:
We investigated for 551 undergraduate medical students the predictive validity (linear regression analyses) of the Swiss MCAT and of personality measures (NEO-FFI) on their exam scores throughout the 3 preclinical years. We analyzed separately scores on basic medical sciences MCQ and OSCE exams.

Summary of results:
MCAT only significantly predicted year 1 MCQ scores (β=.28). Conscientiousness significantly predicted year 1 (β=.24) and 2 (β=.20) but not year 3 MCQ scores. Extraversion predicted lower year 3 OSCE scores (β=-.23).

Conclusions:
Results at one medical school confirm that MCAT and Conscientiousness are predictive measures for year 1 performance. However, their predictive validity disappears (MCAT) or decreases (Conscientousness) during subsequent preclinical years.

Take-home message:
Screening tools relying on MCAT and Conscientiousness measures have limited predictive validity of performance during preclinical training. Further research is needed to develop and test other screening measures in order to select the most suitable candidates for medical school.