

## **Role of cognitive and non cognitive characteristics in 1<sup>st</sup> year selection for medical studies: a comparative study**

**Background:** In Switzerland, as in other Western countries, the number of graduate medical students per year has to dramatically improve to keep up with the aging growing population demand. Contrariwise, our first year selection is severe and exclusively based on MCQ scores. Non cognitive dimensions are not taken into account despite they seem particularly relevant for selecting efficient, professional and caring doctors. There is a strong need of empirical data about their contribution to choose future doctors who best fulfill societal needs. **Aims:** to establish 1<sup>st</sup> year medical students' specific cognitive and non-cognitive profiles; to analyze if and how non cognitive features impact MCQ scores exam type. **Method:** First year medical students (N=180) were assessed on personality traits (NEO), learning styles (SPQ-R), professional motivations, high school grade average score (HES), university exam's score (SES). Answers were compared with standardized data and with 1<sup>st</sup>-year Psychology- (N=150) and Sciences (N=160) students whose selection criteria aren't MCQ only. T scores were used to compare personal traits among populations; multivariate linear regressions to analyze dimensions related to SES.

**Summary of results:** Medical students were very high on extraversion (90 percentile rank) and low on agreeableness (30 percentile rank). Regression model ( $r^2=0.301$ ) showed that HES, SPQ-deep motive, NEO-openness (positive) and, marginally, but negatively, NEO-agreeableness, significantly relate to SES. Results differ by gender. **Conclusions:** Medical students present specific profiles. 1<sup>st</sup> year MCQ exam selects some unwished personal features and differs by gender. **Take-home message:** Adding non cognitive measures might help to select in a more gender fairly way, more suitable candidates for medical school.