



Are personality traits really weak/moderate predictors of empathy?

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Dear Sir

We read with great interest the article by Magalhães et al. (2012) in a recent issue of *Medical Teacher* that assessed empathy in medical students with the Jefferson Scale of Physician Empathy and found that personality traits are weak or moderate predictors of empathy.

In this context, we administered the 28-item Interpersonal Reactivity Index (IRI) and the 60-item NEO Five Factor Inventory (NEO-FFI) to 65 first year medical students 2012/2013 academic year. The IRI comprises several statements with corresponding five-point likert scale (0 = does not describe me well, 4 = describes me very well) and measures four separate aspects of empathy through four subscales: perspective-taking (PT), fantasy scale, empathic concern (EC) and personal distress (PD).

The NEO-FFI was designed to assess the high order personality traits of extraversion, agreeableness, conscientiousness, neuroticism and openness to experience (0 = disagree, 4 = agree).

We have found positive significant correlations between the total score of IRI either with agreeableness ($r=0.628$, $p < 0.001$) and openness to experience ($r=0.522$, $p < 0.001$), it was stronger in our study. Thus, in our case, the logistic regression model using the five dimensions NEO-FFI to predict top tercile empathy revealed excellent discrimination (area under the ROC curve = 0.824, 95% CI = 0.72–0.93).

Additionally, when we assessed the correlations with each IRI sub-scales and NEO-FFI, we found positive correlations between PD and neuroticism ($r=0.512$, $p < 0.001$), EC and extraversion ($r=0.287$, $p=0.021$) and between PT and conscientiousness ($r=0.356$, $p < 0.001$), contradicting the results of that study that only demonstrated associations with openness to experience and agreeableness.

In summary, our study shows a higher discrimination ability of the NEO-FFI to predict top tercile of empathy. Is it possible that freshman medical students may be more similar to general population than to physicians, and so IRI can be a better option to assess empathy either in the first year of the medical course or even in the admission process to medical schools.

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References

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Response to “are personality traits really weak/moderate predictors of empathy?”

Dear Sir

The results described in the Letter To The Editor in response to our manuscript describes support our conclusions that personality traits and empathy are correlated. The authors used a different scale to measure empathy – the Interpersonal Reactivity Index (IRI) – and described correlations between IRI total scores and Big5 personality traits higher than the ones we found between JSPE and the same traits. The concurrence of both studies strengthens the hypothesis that something about students' empathy is conditioned by personality. The authors found a contradiction in the results of the two studies concerning the correlation between conscientiousness and empathy scores. We would argue this is not the case since we reported correlations of JSPE total score with Conscientiousness (as displayed in Table 2) even though only Agreeableness and Open to Experience were significant predictors of falling into the top top tercile of JSPE scores. We also believe that the correlations of personality with IRI-subscores will not necessarily have the same meaning than the correlations with total JSPE scores. The items on the IRI ask the respondent to answer how he/she identifies she/herself with the item whereas the JSPE items ask respondents to assess the importance of the item within the physician/patient relationship.

The authors raise reservations on the use of JSPE to capture the empathy of 1st year students. This is a thoughtful issue as JSPE has been developed and trialed with the intention of being “specific for patient care situations” (Hojat et al. 2001) and was adapted to US medical students, whose profile would be probably more equivalent to European 4th year students – nevertheless the JSPE structure has been replicated internationally (Costa et al. 2012). However, related to the JSPE, the IRI scale has the limitation of having been developed with no intention to capture the specificities of medical education. To decide on which is the best scale to use for first year students, we believe it would be important to clarify methodological and conceptual issues. Methodologically, it would be important to assess and test the possible moderating role of year of study in the relation between the IRI and JSPE scores, and the relation of both empathy scores and personality traits. Conceptually, we need to answer questions such as to what extent medical schools expect admitted medical students to differ in empathy from the general population, what distinguishes the two empathy constructs and which would be the appropriate period in which the empathy of the entering student would evolve in to “medical student empathy”. We believe that longitudinal empathy studies