

Are Student Attitudes Toward Family Medicine Research Associated With Family Medicine Career Choice at the Individual Level?

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TO THE EDITOR:

Our academic department was excited to discuss a new paper by Beinhoff and colleagues published in the April 2023 issue of *Family Medicine*: “Associations of the Informal Curriculum and Student Perceptions of Research With Family Medicine Career Choice.”¹ In this 16–center study, the authors found that, at a population level, there is a positive association between (a) the percentage of a medical school class that matches into family medicine and (b) a favorable view of family medicine, using the Family Medicine Attitudes Questionnaire (FMAQ). They also found similar correlations with several of the FMAQ subscales, with a particularly strong correlation involving the research subscale. These results build on two of their previous papers: a 2018 two–center study² that validated the survey instrument and a 2019 16–center study,³ of which their new article¹ is a secondary data analysis.

These results agree with what would have been expected a priori: that a more favorable impression of family medicine would be, on average, associated with a greater likelihood of pursuing family medicine as a career. Why the research subscale should have a particularly strong association is less obvious, but this association nevertheless also seems reasonable. Population–level associations, however, can sometimes be misleading about individual–level associations due to aggregation bias or problems with ecological inference.⁴

It appears that prior analyses have evaluated individual–level associations between attitudes toward family medicine (FMAQ score) and choice of family medicine as a career.³ In these analyses they found that the overall questionnaire score was independently predictive of choosing family medicine at the individual level.³ Likewise, features of the student’s medical school and race/ethnicity were found to be relevant predictor variables at the individual level.³ It appears that

data are available³ to determine whether the association with the research subscale, reported in their most recent paper at the population level, is also present at the individual level after controlling for relevant covariables. To my knowledge, however, this analysis has not yet been carried out.

To test this association, I suggest the following model for multivariable logistic regression:

Family medicine career intention ~ *medical school* + *race/ethnicity* + *FMAQ except research* + *FMAQ research subscale* + (any other relevant covariables)

In this context, FMAQ except research is the FMAQ total score minus the research subscale. This model would help determine whether an individual–level association is present after controlling for overall FMAQ scores. I suspect that this test could be meaningfully carried out, although multicollinearity between the FMAQ except research and FMAQ research subscale would need to be checked for, and excluded, for the results to be statistically valid.

If the authors have the time and interest, I invite them to conduct this analysis and share these findings with the community. I also offer my commendation to the authors on their excellent work in compiling data on >1,000 medical students across 16 institutions—a truly enormous, and difficult, undertaking.

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