Medical Students' Personal Qualities and Values as Correlates of Primary Care Interest

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Paper prepared for the Association for Medical Education in Europe conference, Edinburgh, September 2004.

The use of non-cognitive factors in the medical student selection process has been suggested by the Medical School Objectives Project (MSOP).[1] Medical schools must use selection methods that validly measure applicants' noncognitive qualities, but primary care (PC) schools have a particular need. As part of our medical schools' Student Success Project, the authors sought to better understand the selection, retention, and career development processes of our medical students. This preliminary study correlated entering students' personality and values scores with their professed interest in PC.

Method

Participants

Ninety-three (89%) entering medical students participated in this study. Of these students, 57 (61.3%) listed a primary care specialty among their top three medical specialty choices, whereas 36 (38.7%) listed only non-primary care specialties. Participants included 44 (47.3%) men and 49 (52.7%) women. Regarding ethnicity, 58 (62.4%) Caucasians, 29 (31.2%) Asians, 4 African-Americans (4.2%) and 1 (1.1%) Native American participated in this study. One (1.1%) individual did not indicate his/her ethnicity.

Procedures

Participants completed instruments assessing personality, values, and specialty interests during orientation to medical school in 2002. Four instruments, which were group administered, were completed by participants in less than 90 minutes.

Measures

The Sixteen Personality Factor Questionnaire (16PF)[2] provided an objective and standardized measure of personality. The 16PF measures the following dimensions of personality: Warmth, Reasoning, Emotional Stability, Dominance, Liveliness, Rule Consciousness, Social Boldness, Sensitivity, Vigilance,

Abstractedness, Privateness, Apprehension, Openness to Change, Self-Reliance, Perfectionism, and Tension.

The Personality Self-Perception Form, a non-standardized, self assessment of personality has medical students rate themselves along a continuum of factors using descriptions of the 16PF factors. This instrument was conceptualized and used in an earlier study.[3] This instrument was developed from the 16PF scores sheet with the permission of the test publishers. For purposes of the present study, permission for use of the PSP was secured by Scott Meit, PsyD as part of a larger, multisite study of personality of medical students.

The Career Plan Survey is a brief 13-item survey that asks students to indicate their top three medical specialty choices. Primary care specialties were family medicine, internal medicine, and pediatrics. Non-primary care specialties included all other specialties including dermatology, emergency medicine, pathology, psychiatry, radiology and other specialties including surgery.

The Physician Values in Practice Scale (PVIPS)[4-5] assesses the following six broad values: Prestige, Service, Autonomy, Lifestyle, Management and Scholarly Pursuits. Medical students rate how strongly they agree or disagree with 38 statements.

Data Analysis

Scores from the 16PF, PSP, PVIPS, and the Career Plan Survey were used to predict students' PC interest or NPC interest using logistic regression analysis.

Results

About 80% of the medical students were correctly categorized into PC or NPC based on these variables. The strongest noncognitive predictor was Warmth, measured by either the standardized, psychological instrument (16PF) or the non-standardized, self-assessment survey (PSP). Dutifulness (measured by the Rule-Consciousness factor) and Trusting Nature (measured by the Vigilance factor)

significantly added to PC prediction, if measured by the 16PF but not the PSP. Placing higher value on service and lower value on prestige were significant predictors only if personality scores (16PF/PSP) were not entered into the analysis (see Table 1). These five non-cognitive variables were significant even after accounting for gender, race, and physician parents.

Discussion

Identifying students who may pursue primary care specialties is important to medical schools. This study examined personality factors and values to better understand how these non-cognitive qualities describe medical students who express an early interest in primary care specialties from those who do not. Specifically, the findings of this study may be helpful to medical school admissions personnel who review applications, interview, and admit students For example, candidates describing themselves as warm and attentive to others during interviews or in their personal statements may be expressing an accurate self-assessment, because Warmth scores from both self-report and standardized measures similarly predicted PC interest. A previous study[6] using the 16PF revealed that family practitioners scored higher on Warmth than anesthesiologists and general surgeons.

Regarding the personality factors that pertain to Dutifulness and Trusting Nature, the 16PF better predicted which students had an interest in primary care compared to the non-standardized PSP. With regard to earlier research using the 16PF, it is interesting to note that Borges and Osmon[6] found that the personality factor of Dutifulness differentiated family practitioners from anesthesiologist and general surgeons. Family practitioners were more dutiful than the other specialists. Additionally, regarding Vigilance, family practitioners were found to be more trusting compared to their non-primary care counterparts.

Furthermore, based on the results of this study, the authors recommend the PVIPS, as a personal values measure, be administered independent of the 16PF. The PVIPS scales of Service and Prestige

predicted PC interest. Medical students with a primary care interest placed a higher value on service and assigned a lower value to prestige than medical students who were interested in non-primary care specialties.

Predictive validity of non-cognitives throughout medical school should be examined. For example, a next step in our research is to survey these students after they select a medical specialty to determine how many students with an early interest in primary care actually entered a primary care specialty. It is suggested that qualitative interviews be conducted to provide added information about specialty selection.

References

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Table 1. Logistic Regression For Predicting Primary Care Interest using the Physician Values in Practice Scale

Predictor	Beta	S.E.	p*
Service	.101	.042	.021
Prestige	-.090	.039	.017

* significance level $p < .05$