

Appearance(s) Before Academic Review and Promotions: Any Personality Differences in  
Medical Students?

R. Stephen Manuel, Nicole J. Borges, and Thomas C. Atwood

Northeastern Ohio Universities College of Medicine

Paper prepared for the 34th Annual Meeting, Association for the Behavioral Sciences and  
Medical Education, Vail, CO. October, 2004.

Despite medical schools having some system in place to review student progress and promote students (referred to hereafter as academic review and promotions; ARP), little research has been conducted with the purpose of understanding personality characteristics of the students who appear before an ARP committee or governing body. A recent study by Wear et al.<sup>1</sup> sought to examine and understand how medical students experienced the ARP process and described students' attitudes, beliefs, explanations, and orientations about it. Although Wear et al.<sup>1</sup> investigated many factors related to the ARP process, personality characteristics were not included. The authors sought to further investigate medical student persistence by studying the role that personality plays in ARP appearances. Specifically, this exploratory study sought to determine if personality differences existed between medical students who appear before ARP and students who

do not. Second, it investigated if personality differences existed between students who had one appearance before ARP compared to students who had multiple appearances.

## Method

### *Procedure*

As part of a large scale longitudinal study to determine medical student success, the Sixteen Personality Factor Questionnaire was group administered to 631 students over six consecutive years during orientation. Participants' ARP records were accessed and students were grouped by whether they had appeared before ARP.

Reasons for appearing before ARP included academic problems (e.g., one or more less than satisfactory grades during an academic year, failure of USMLE Step 1) and relevant non-cognitive issues (e.g., unacceptable professional behavior).

### *Sample*

Participants were 631 students who entered a combined bachelor's-M.D. degree program from 1995-1998. Students in this program are admitted after completing high school and complete their bachelor's and M.D. degrees in six to seven years. Of the 631 students who participated in this study, 469 (74.3%) matriculated to medical school. 143 (30%) of these students appeared before ARP one or more times. Times before ARP ranged from 1 to 14. 51 (35.7%) of the 143 students appeared before ARP one time, whereas 92 (64.3%) students appeared before ARP more than one time. See Table 1 for a frequency count of ARP visits.

Regarding sex, the 326 students who matriculated to the medical school but who did not appear before ARP comprised 174 (53.4%) men and 152 (46.6%) women, whereas the 143 students who appeared before ARP one or more times comprised 85

(59.4%) men and 58 (40.6%) women. Given that in some cases there was a small number of individuals comprising certain ethnic groups, to protect the identity of participants a breakdown of individuals by ethnicity is not reported.

### *Measure*

The 16PF (4th ed.)<sup>2</sup> was used to assess personality. The 16PF relies heavily upon the theory that a normal personality has at least 16 independent dimensions. The self-administered questionnaire contains items that measure 16 bipolar factors. Warmth, Intelligence, Emotional Stability, Dominance, Impulsivity, Conformity, Boldness, Sensitivity, Suspiciousness, Imagination, Shrewdness, Insecurity, Radicalism, Self-Sufficiency, Self-Discipline, and Tension comprise the primary factors. Short-term and long-term reliability of the 16PF is .80 and .52, respectively.

### Results

A multivariate analysis of variance (MANOVA) was performed to determine if personality differences, as measured by the 16PF, existed between students who had appeared before ARP and students who did not. Results of the MANOVA revealed no significant differences at the  $p < .05$ , although Intelligence approached significance ( $F(2, 467) = 3.70, p = .055$ ). Students who appeared before ARP had higher scores on the Intelligence factor ( $X = 9.27, SD = 1.86$ ), as measured by the 16PF, than students who did not appear before ARP ( $X = 8.91, SD = 1.90$ ).

A second MANOVA was conducted to determine if personality differences existed between students who had one appearance before ARP compared to students who had multiple appearances. Results revealed no significant differences between the groups.

## Discussion

In aiding medical educators to better understand factors explaining which students are more likely to appear before ARP and their recidivism rate, personality does not seem to be among the non-cognitive factors. It is interesting, however, that students who were more likely to appear before ARP scored higher on the 16PF variable of Intelligence. The fact that students appear before ARP for reasons other than academic problems (i.e., unprofessional behavior) may provide a partial explanation. It is possible that some of the students with high scores on Intelligence went before ARP for non-cognitive issues. Unfortunately, the student ARP records accessed for this study did not indicate whether the student went before ARP for academic or non-cognitive issues. Future studies in this area should track this variable so that a better understanding of the role of intelligence in the ARP process can be realized. Given that the 16PF provides only one measure of personality, future studies should also consider using alternative measures to further investigate the role that personality may play in the ARP process. Additionally, in order to identify relevant themes, it is suggested that qualitative inquiry be used for follow-up studies.

## References

1. Wear, D., Keck-McNulty, C., Jones, B., Penn, M., & Moss, P. Medical Students' Experience of Academic Review and Promotions Committees. *Teaching and Learning in Medicine*, 2004;16:226-232.
2. IPAT Staff. (1986). *Administrator's Manual for the 16 Personality Factor Questionnaire*. Champaign, IL: Institute for Personality and Ability Testing.

Table 1

Number of Times Students Appeared Before ARP

---

Times Before ARP	Number of Students	Percentage
1	51	35.7%
2	26	18.2%
3	28	19.6%
4	12	8.4%
5	12	8.4%
6	4	2.8%
7	4	2.8%
8	3	2.1%
9	2	1.4%
14	1	.7%