Do Clinical Evaluations in a Psychiatry Clerkship Favor Students With Positive Personality Characteristics?

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Objective: The authors examine associations of personality characteristics, National Board of Medical Examiners subject examination performance, and Objective Structured Clinical Examination performance with clinical evaluations of third-year medical students in a psychiatry clerkship.

Methods: Students completed the Revised NEO Personality Inventory, which measures personality domains of neuroticism, extraversion, openness, agreeableness, and conscientiousness and associated personality traits. At clerkship completion, students completed the National Board of Medical Examiners subject examination and a psychiatry Objective Structured Clinical Examination, and were evaluated by attending physicians (using a standardized evaluation form) regarding their clinical “knowledge and skill” and “interpersonal behavior.” Data were analyzed using Pearson correlation and canonical correlation.

Results: National Board of Medical Examiners subject examination and Objective Structured Clinical Examination scores were uncorrelated with clinical evaluations of “knowledge and skill” and “interpersonal behavior.” Personality variables explained a moderate amount of variance in clinical evaluations. “Knowledge and skill” was positively associated with the domain of conscientiousness, the extraversion trait of warmth, and the conscientiousness traits of competence and achievement striving. “Interpersonal behavior” was negatively associated with the neuroticism trait of angry hostility and positively associated with the domain of agreeableness; the extraversion traits of warmth, gregariousness, and positive emotions; and the agreeableness traits of trust, altruism, compliance, and tender-mindedness.

Conclusion: Clinical evaluations of medical students may favor personality styles that reflect positive elements of extraversion, agreeableness, and conscientiousness. The present findings raise questions regarding the validity of clinical evaluation elements in clerkship performance appraisal.

Personality characteristics of medical students are correlated with academic achievement and clinical skill, including preclinical and clinical grades and grade point average, National Board of Medical Examiners’ examinations, and clinical skills examinations (1–7). An additional source of evaluation of students completing third-year clinical clerkships is the clinical evaluation. Typically, this evaluation is completed by an attending physician who rates the student on a standardized form in a variety of areas, including general knowledge of the discipline, history and examination skills, professionalism, team and patient rapport, and the like. Despite wide variability in clinical evaluation methods and evidence for poor validity of these evaluations in relation to more objective indicators of student performance (8, 9), clinical evaluations are often significant contributors to the final grade received for a clerkship. Since clinical evaluations are primarily subjective, global impressions of students gleaned during relatively brief interactions on a clinical service, the extent to which student personality characteristics color these evaluations is an important issue, especially in light of the tenuous validity of these evaluations with respect to other performance assessments.

At the least, clinical evaluations of student knowledge and clinical behavior should correlate to the same (or greater) degree with independent indicators of performance in those areas than they do with student personality characteristics. For example, in multivariate analyses of personality-performance relationships among medical students, personality characteristics were significantly predictive of indicators like grades or grade point averages (1, 2, 4, 7), particularly aspects of conscientiousness. These indicators, however, had comparable levels of association...
or, more often, stronger associations with variables like MCAT score, previous academic performance, and ratings from admissions interviews. With respect to clinical evaluations of student performance, where relationships to other performance indicators are generally weak, it is conceivable that the largest proportion of variability in these evaluations is, in fact, explained by the demeanor of the student, as expressed through “positive” or “negative” personality traits.

Recently, Davis and Banken (10) examined this question in an obstetrics-gynecology clerkship. They studied whether personality characteristics of medical students had more predictive validity than the National Board of Medical Examiners’ subject examination with regard to end-of-clerkship clinical evaluations. They found that the Extraversion and Introversion scales of the Myers-Briggs Type Indicator, but not the subject examination score, were significantly correlated with clinical evaluations (i.e., aggregated evaluation of medical knowledge, clinical performance, patient interaction, team interaction, and initiative/work ethic). Davis and Banken concluded that obstetrics-gynecology clerkship grades, often heavily weighted by clinical evaluations, “may be more influenced by personality rather than clinical skill.”

The present study sought to extend the reasoning behind the Davis and Banken study to clinical evaluations in psychiatry. Moreover, the Davis and Banken study was limited by a small sample size (63 students), relatively few personality dimensions, the use of univariate statistical analyses, and the absence of an independent measure of clinical/interpersonal skills. The current study addressed each of these limitations. Personality characteristics of third-year psychiatry clerks were assessed using the Revised NEO Personality Inventory (NEO PI-R), a comprehensive measure of normal adult personality based on the five-factor model of personality, a model that enjoys widespread acceptance among personality theorists in psychology (11, 12). Using both univariate and multivariate statistical analyses, clinical evaluations of knowledge/skill and interpersonal behavior were examined in relation to personality variables, National Board of Medical Examiners’ subject examination performance, and clinical performance as assessed on an Objective Structured Clinical Examination. It was hypothesized that student personality characteristics, particularly those related to extraversion, would explain significantly more variance in clinical evaluations than the National Board of Medical Examiners’ subject examination (general knowledge) or the Objective Structured Clinical Examination (clinical skills).

Study Sample, Setting, and Recruitment

Third-year medical students completing the clinical clerkship in psychiatry during the 2005–2006 academic year at St. Louis University were recruited to participate. At clerkship orientation, students were apprised of the opportunity to participate in this research, including a sign-up sheet that detailed the study purpose and the times, dates, and places for participation.

Measures

The Revised NEO Personality Inventory (NEO PI-R) was used to assess personality (11). Consistent with the five-factor model of personality, the NEO PI-R measures five domains of normal adult personality (it does not measure psychopathology) and six personality traits per domain (30 traits total). The domains include neuroticism (N) (higher scores = stronger tendency to experience negative affect), with traits of anxiety, angry hostility, depression, self-consciousness, impulsiveness, and vulnerability; extraversion (E) (higher scores = stronger tendency toward sociability and affability), with traits of warmth, gregariousness, assertiveness, activity, excitement-seeking, and positive emotions; openness (O) (higher scores = stronger tendency toward divergent thinking, creativity, emotionality, and unconventionality), with traits of fantasy, aesthetics, feelings, actions, ideas, and values; agreeableness (A) (higher scores = stronger tendency toward trust, altruism, empathy, and cooperativeness), with traits of trust, straightforwardness, altruism, compliance, modesty, and tenderness; and conscientiousness (C) (higher scores = stronger tendency toward purposefulness, reliability, goal striving, and self-discipline), with traits of competence, order, dutifulness, achievement striving, self-discipline, and deliberation. Scores are norm-referenced, gender-based T scores (mean = 50, SD = 10). As detailed in the NEO PI-R Professional Manual (11), there is substantial conceptual and psychometric research to support the NEO PI-R as a valid, reliable, and comprehensive measure of normal adult personality.

The student’s national percentile rank (adjusted for academic year quartile) on the National Board of Medical Examiners’ subject examination was used as an indicator of psychiatry knowledge. A psychiatry Objective Structured Clinical Examination was used to assess clinical skills (13). It includes six “stations” where all students interviewed a standardized patient portraying a psychiatric disorder. Binary checklists reflected student coverage of con-

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