Personality and values as predictors of medical specialty choice

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ABSTRACT

Research rarely considers the combined influence of personality traits and values in predicting behavioral outcomes. We aimed to advance a germinal line of inquiry that addresses this gap by separately and simultaneously examining personality traits and physician work values to predict medical specialty choice. First-year medical students (125 women and 119 men) responded to measures of personality and physician work values. After graduation, participants' residency choices were identified. Results indicated that personality traits predict person- or technique-oriented medical specialty choice. Physician work values, whether used alone or in tandem with personality traits, however, did not significantly predict specialty choice. Implications for practice and research are discussed.

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Work values have long been considered as a trait variable suitable for matching people to jobs in individual difference tradition (Lofquist & Dawis, 1978; Holland, 1997; Rounds, 1990; Super, 1970). As such, theorists and researchers have advanced work values, much like personality traits, as useful for predicting and promoting a range of behavioral outcomes. Such outcomes include occupational choice, work adjustment, and job satisfaction (Dawis, 1991, 2001; Holland, 1997; Super, 1995; Zytowski, 1994). Both work values and personality traits are widely thought to affect work motivation (Dawis, 2001; Furnham, Forder, & Ferrari, 1999) and research generally supports links between personality and vocational choice (Phillips & Jome, 2005).

The utility of values alone as an individual difference variable for predicting vocational choice, while receiving some support (e.g., Judge & Bretz, 1992), has not, however, been as well studied and consequently not as well supported by the literature (Dawis, 2001; Hirschi, 2008). Some research suggests that examining the combined influence of values and other variables, such as personality and vocational interests, may be a more useful approach to using values for predicting behavioral outcomes like vocational choice (Duffy, Borges, & Hartung, 2009; Hirschi, 2008; Parks & Guay, 2009; Rounds, 1990). The present study aimed to further test this possibility by examining the combined influence of personality traits and values in predicting medical specialty choice.

Distinct lines of inquiry have investigated the particular and separate influences of values and personality on human behavior. Seldom have researchers examined the potential joint influences of these variables on behavioral outcomes. To address this problem, Parks and Guay (2009) developed a model that simultaneously considers values and personality in motivational processes related, respectively, to goal content such as achieving good grades and goal striving such as persisting in a behavior despite obstacles. Within this framework, personality traits reflect what people tend to do naturally and values reflect what people believe they ought to do. When combined, personality traits and values may increase predictability of behavioral outcomes because they represent distinct yet complementary variables (Parks, 2007).

Recent work in vocational psychology (Berings, De Fruyt & Bouwen, 2004; Hirschi, 2008; Duffy et al., 2009) has begun to examine personality and values, both in tandem and along with other constructs. This work aims to gain a more complete and holistic understanding of how these variables influence vocational behavior. Notably, Hirschi (2008) examined personality

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complexes comprising traits, vocational interests, work values, and self-evaluations. Results of his study supported using these variables in combination to better comprehend career choice and development. Similarly, Berings et al. (2004) found that a majority of work values relate moderately to personality traits. We aimed to further test relationships between personality traits and work values by examining their potential joint influence in predicting career specialty choice among medical students.

Previous research has established that significant differences in personality traits and values exist among physicians with regard to their medical specialty (e.g., Borges & Gibson, 2005; Borges & Osman, 2001; Hojat et al., 1998; Smith et al., 2007; Wasserman, Yufit, & Pollack, 1969; Xu et al., 1996–1997). Differences in personality traits and values have also been observed in relation to medical students' self-reported specialty preferences (Hojat & Zuckerman, 2008; Leong, Hardin, & Gaylor, 2005; McFarland & Rhoades, 1998; Rogers & Searle, 2009). However, these studies have investigated personality traits and values with cross-sectional research designs and have examined personality traits and values separately. The complementary nature of personality traits and values (Parks, 2007; Parks & Guay, 2009) may in fact prove to be particularly useful in predicting differences related to specialty choice.

Using a longitudinal design, the present study investigated separately and conjointly the variables of personality traits and physician work values as predictors of medical specialty choice within a sample of first-year medical students. Previous research has demonstrated that personality and value differences exist among practicing physicians in relation to chosen specialty and among medical students in relation to specialty preference. We hypothesized that personality traits and values will separately predict specialty choice. Additionally, we hypothesized that using personality traits and values in tandem will increase the accuracy in predicting medical specialty choice.

Method

Participants

Participants comprised 244 first-year medical students (125 women and 119 men) enrolled in a combined six-year B.S./M.D. ($n = 180$) or 4-year M.D. ($n = 64$) program at a Midwestern medical school. Students in the six-year B.S./M.D. program typically have an average age of 20 years upon entering the M.D. portion of the program and elect to enter the profession of medicine directly from high school. They complete two years of undergraduate course work and then enter medical school in their third year. Some students enter the M.D. program directly after completing a traditional four-year degree. These direct-entry students typically have an average age of 22 years. A one-way analysis of variance (ANOVA) was conducted to determine whether or not B. S./M.D. and four-year direct-entry M.D. students differed with regard to the 22 variables (6 physician work values and 16 personality traits) used in the study. Bonferroni adjustment to the alpha level was made as control for multiple comparisons (.05/ $22 = p < .002$). Results indicated no significant differences between the two groups on the variables. From the total of 338 students invited to participate in the study, 31 students did not consent to do so. An additional ten students partially completed either one or both measures. Medical specialty choice was not available for 53 students, possibly due to student attrition during medical school or to a student being off cycle in terms of graduating as originally scheduled. Two-hundred-forty-four students completed all measures and later graduated from medical school and entered post-graduate medical training as residents between 2006 and 2008 yielding a 72% response rate.

Measures

Physician work values

The 38-item version of the *Physician Values in Practice Scale* (PVIPS; Hartung, Taber, & Richard, 2005) was used to measure work values in the context of medical practice. Each item is preceded by the stem "In my medical practice it will be important that I..." followed by a statement such as "be recognized as the best physician in my group." Respondents indicate their level of agreement with each statement using a Likert-type scale ranging from 1 = *strongly disagree* to 5 = *strongly agree*. Responses are summed to yield measures of six core values found to be common among multiple and large samples of medical students: Prestige (obtaining recognition and rewards), Service (caring for others), Autonomy (independence and self-direction), Lifestyle (predictable and controllable work schedule, work–nonwork balance), Management (supervise others), and Scholarly pursuits (involvement in scholarly activities). Hartung et al. (2005) reported Cronbach's alpha internal consistency reliability estimates ranging from .77 for lifestyle to .88 for prestige. The PVIPS has demonstrated good content and construct validity evidence (Hartung et al., 2005; Hartung, 2010).

Personality

The *16 Personality Factor Questionnaire Fifth Edition* (16 PF; Cattell, Cattell, & Cattell, 1993) was used to measure personality traits. The 16 PF is a 185-item norm-referenced test of 16 bipolar personality traits including Warmth, Reasoning, Emotional Stability, Dominance, Liveliness, Rule-consciousness, Social Boldness, Sensitivity, Vigilance, Abstractedness, Privateness, Apprehension, Openness to Change, Self-reliance, Perfectionism, and Tension. The 16 PF uses a three-point multiple-choice response format with the middle response being a question mark representing an "in between" response or uncertainty in responding to the question. Estimates of internal consistency reliability (Cronbach's alpha) range from .68 for Dominance to .87 for Social Boldness (Conn & Rieke, 1994). Because the scales of the 16 PF are factor-analytically derived, it demonstrates good