

Personality Differences in Career Choice Patterns

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Vocational identity, coined by Holland, Gottfredson, and Power (1980), is an important construct for physician career development. The process of vocational development for physicians begins with the decision to enter medical school and continues to be influenced by vocational decisions pertaining to specialty choice and practice type. A review of the literature shows that physician vocational development has been grouped into three tasks (crystallization, specification, and implementation) pertaining to career choice and to specialty choice (Savickas, 1984).

In defining the construct of vocational identity, Holland, Gottfredson, and Power (1980) suggested that the relation between vocational behavior and personality be examined. To better understand the vocational development tasks of physicians and to learn about their relation to personality, the present study sought to examine personality factors of aspiring physicians who exhibit different career

choice patterns based on vocational development tasks. It tested the hypothesis that medical students with different career choice patterns were significantly different with regard to personality. This present study contributes to the literature because no studies, known to these authors, have investigated vocational identity development as it relates to personality factors of aspiring physicians. The findings of this study may provide information helpful in identifying students, based on certain personality characteristics, who are struggling with the vocational development tasks associated with becoming physicians. Appropriate interventions may then be designed and implemented by medical school advisors, counselors, and educators to assist medical students.

Method

This study compared personality factors of four groups of first-year medical students who exhibited different career choice patterns. During the orientation process, the Medical

Career Development Inventory (MCDI) and the Sixteen Personality Factor Questionnaire (16PF) were group administered to first-year medical students at a mid-Atlantic medical school. The instruments were number coded in order to preserve anonymity. The groups were categorized according to results of the MCDI and comprise medical students who have: (a) crystallized a career preference, but who have not specified a career preference (n=15), (b) specified a career preference, but who have not crystallized a career preference (n=31), (c) crystallized and specified a career preference (n=95), and (d) who have neither crystallized or specified a career preference (n=14). Career crystallization refers to formulating a general preference for a career in medicine and is concerned with forming a vocational identity (Savickas, 1984), whereas career specification refers to converting a generalized preference into a specific preference for a career as a physician and involves the coping behavior of self-evaluation. The third

task of implementation, as well as occupationally related tasks, was not included in this study because these tasks pertain more to physicians not medical students.

Instruments

The MCDI was constructed by Savickas, Super, and Thompson (Savickas, 1984) to measure vocational development during the early stages of a career as a physician. The MCDI measures two cycles of tasks, career and occupational, involved in physician vocational development. The MDCI consists of seven vocational development tasks: career crystallization, career specification, career implementation, occupational crystallization, occupational specification, occupational implementation, and stabilization (Savickas, 1984). The MCDI has five items representing each of the seven developmental tasks for a total of 35 items. Responses to each item are in Likert format. Criterion-related validity has been reported to be $r=.41$ with reliability

coefficients ranging from .73-.91 (Henry, Bardo, & Henry, 1992).

The 16PF (5th ed.; Cattell, Cattell, & Cattell, 1993) was used to assess personality. The 16PF is a self-administered questionnaire and contains 185 items that measure 16 bipolar factors. The 16PF has a fifth-grade reading level (Russell & Karol, 1994). The norm group ($N=2,500$) ranged in age from 15-92 years and in education from 7-25. Internal consistency estimates range from .64-.85 with an average of .74. Test-retest reliability estimates have been reported to be approximately .80 for a 2-week interval and .70 for a 2-month interval (Krug & Johns, 1990).

Sample

Participants were first-year medical students at a mid-Atlantic medical school. All 168 medical students in the first-year class agreed to participate, but only 155 provided useable data. With regard to gender, 69 (44.5%) females and 86

(55.5%) males participated in this study. Age of participants ranged from 20-38 years ($M=23.66$, $SD=2.94$). Thirty-nine participants did not report their age.

Analysis

Data were analyzed using multiple discriminant function analysis. The 16PF served as the independent variables and the dependent variables were the four career pattern groups categorized by the MCDI. Discriminant analysis determined the extent to which the four career pattern groups could be differentiated by the set of 16PF scores.

Results

The discriminant analysis involved calculating means and standard deviations for 16PF raw scores for the four career pattern groups. Univariate F -ratios were calculated to determine significant differences between group means for the four groups. Significant differences at $p < .05$ between means existed for six of the personality factors: Warmth ($F=2.79$,

$p=.042$), Social Boldness ($F= 6.16$, $p=.001$) Abstractedness ($F=2.91$, $p=.037$), Self-Reliance ($F=3.47$, $p=.018$), Perfectionism ($F=2.76$, $p=.044$) and Tension ($F=3.98$, $p=.009$).

The discriminant analysis showed that the personality factors of Social Boldness and Tension had large enough F values to be included in the discriminant functions. The first discriminant function is characterized by Social Boldness, which reflects being thick-skinned versus shy and sensitive (Wilks' $\lambda=.825$, $X^2=29.00$, $p < .000$). The second discriminant function was characterized by Tension, which reflects being tense, driven, and impatient versus relaxed and patient (Wilks' $\lambda=.927$, $X^2=11.48$, $p < .003$).

Classification results indicate how well group membership can be predicted for each career pattern group for the personality factors and provide a check of adequacy of the discriminant functions. Of the 151 participants, the percentage of correctly classified cases was 37.4%.

Discussion

The finding of this study supported the hypothesis that personality differences exist for medical students who exhibit different career choice patterns, as measured by the MCDI. The results of the present study showed that the personality factors of Social Boldness and Tension predicted differences between the career pattern groups. Medical students who had neither crystallized nor specified a career preference were less thick-skinned and socially bold than participants who had coped with one or both of the tasks. Additionally, medical students who had coped with the task of career crystallization, or who neither crystallized nor specified a career preference, were more tense, impatient and driven than participants who had coped with career specification or who had coped with both tasks.

The findings of this study are consistent with other studies (Henry, Leong, & Robinson, 1992; Savickas, Alexander, Jonas, & Wolf, 1986) in that medical students have

concerns about vocational development. The major implication of the present study is that personality may be a factor in the vocational development of medical students. Given this, it is recommended that assessment of vocational identity and personality be offered to medical students. Information yielded by this kind of assessment may stimulate discussions with medical students about identifiable areas of concern, such as developing one's identity as a physician, choosing a specialty and a residency, etc.

Findings of this study provide information regarding medical career development that can be used in career planning courses or workshops for medical students. Medical school counselors, advisors, and professional development personnel should continue to provide services targeted towards career decision-making and vocational development of aspiring physicians. They are encouraged to develop programs and interventions designed to help medical students cope with the

vocational identity tasks explored in this study. As suggested by Henry, Bardo, and Henry (1992), the MCDI should be used as a pre- and pos-test measure to evaluate the effectiveness of career development seminars, programs, and interventions for medical students. Limitations of this study, which may influence the generalizability of the results, include its small sample size and that data were only collected from one medical school. Future studies should focus on designing longitudinal studies to explore the impact of physician vocational identity development on satisfaction with medicine and specialty choice.

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