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SELECTING MEDICAL STUDENTS:

Personality as a Potential Predictor

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In August 2005

For the Degree of Doctor of Philosophy

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ABSTRACT

The major aims of this research were to investigate the predictive validity of the selection components used by the JCU School of Medicine (JCUSOM), to explore the potential of personality to predict academic performance, and to investigate the incremental validity of both selection components and personality. The JCUSOM offers an innovative undergraduate program that is vertically and horizontally integrated, and utilises group learning methods of instruction. It had its first intake of students in 2000 and by 2002, a total of 212 students were enrolled in the medical program. Upon entry, participants were between 16 and 21 years of age, and gender and cohort distributions were approximately equal. The overall theoretical relationship between personality and academic performance was based on the PPIK model (intelligence-as-process, personality, interests, intelligence-as-knowledge). Within this framework, the relationship between personality and academic performance was approached from three distinct aspects: 1) personality traits within the framework of the Five-Factor Model of personality, 2) patterns of dysfunctional behaviour with the framework of the DSM-III personality disorders, and 3) motives, values and interests within the framework of the RIASEC typology of personality and environments, and the motivating effects of values. The research undertaken was of a multi-point design with personality data being collected at the same time each year over a three-year period. For statistical purposes, in order to have an equivalent number of students completing each of the first three years of training, grades data were collected for a five-year period. The research project comprised one study that investigated the predictive and incremental validity of the existing selection components (OP ranks, written

application and selection interview) and the three distinct aspects of personality, in relation to academic grades. The selection criteria and grades data were archival data, and I collected the personality data. Personality traits were measured using the Hogan Personality Inventory (HPI), patterns of dysfunctional interpersonal behaviours were measured using the Hogan Development Survey (HDS), and motives, values and vocational interests were measured using the Motives, Values and Preferences Inventory (MVPI). Predictive validity was analysed using Pearson bivariate correlations and incremental validity was analysed using hierarchical regression analyses. The regression analyses also accounted for the confounding variables of age and gender. The results indicated that gender and OP ranks were consistent predictors of academic grades across each year of the medical program, and of average performance. The interview criteria relating to interpersonal, self-reliance and communication also had predictive and incremental validity at various stages of training. Conversely, the written application data were not predictive of grades. In relation to the personality data, motives/values/ and interests had no predictive power, while personality traits had predictive validity but lacked incremental validity. While all patterns of dysfunctional interpersonal behaviour had predictive validity, only the syndromes of Away and Against showed incremental validity. My research has illustrated how an organizational psychology approach can be applied to medical selection, by validating criteria through systematic, theory-driven research. It has highlighted the need for medical schools to pay attention to the incremental validity of their selection components, and has provided valuable information that can be used to improve the cost-effectiveness of the JCU selection process.

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STATEMENT OF SOURCES

I declare that this thesis is my own work and has not been submitted in any form for another degree or diploma at any university or other institution of tertiary education. Information derived from the published or unpublished work of others has been acknowledged in the text and a list of references given.

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