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Undergraduate Researcher Article

Article Review: Personality assessment in organisational settings

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This review critiques a research paper entitled *In Support of Personality Assessment in Organizational Settings* (Ones, Dilchert, Viswesvaran, & Judge, 2007). The research paper reported a meta-analysis supporting the utility of the five-factor model of personality (FFM) as a predictor of an individual's performance on the job. This model consists of five personality traits: Openness (e.g., open to new experiences), Conscientiousness (e.g., dutiful), Extraversion (e.g., sociable), Agreeableness (e.g., accepting) and Neuroticism (e.g., anxious). The FFM is usually assessed by the Neuroticism Extraversion Openness Personality Inventory Revised (NEO-PI-R) scale (McCrae, Costa, & Dolliver, 1991). In the article under review the researchers examined several meta-analyses on the FFM, they concluded that Conscientiousness is predictive of overall job performance and is particularly useful when incremented with intelligence tests (Ones et al., 2007). In this critique of the research paper by Ones et al. (2007), the strengths and limitations of this article will be discussed. First, evidence for the theoretical model will be presented. Second, this critique will focus on the method employed in the review. The article under review is based on the assumption that the NEO-PI-R, which assesses the FFM, is a valid and reliable measure of personality and can be used as a valid and reliable tool for predicting job performance. The theoretical strengths of the FFM will first be examined.

Hundreds of studies have established that the FFM is a useful model of personality. The NEO-PI-R, which measures the five personality traits included in this model, has been shown to be valid and reliable and its five factor structure has been replicated across cultures (Church, 2000). The reliability of the FFM has generally been found to be acceptable, with internal consistency coefficients exceeding .64 and test-retest reliability coefficients

exceeding .68 (McCrae et al., 1991). In particular, the construct validity of the FFM has been demonstrated by comparing the results of the NEO-PI-R with the Eysenck Personality Questionnaire (EPQ), which both measure similar personality constructs. Goldberg (1981) revived interest in the FFM over the EPQ when he conducted his own lexical analysis on personality adjectives; he found that five clear factor structures of personality emerged. Further, Costa, McCrae, and Dye (1991) conducted a test validation on the EPQ, which at the time only measured the three facets of Extraversion, Neuroticism and Psychoticism. Results of their lexical analysis found that the Extraversion and Neuroticism scales in both the NEO-PI-R and EPQ were directly comparable. However, the variance captured by the Agreeableness, Conscientiousness, and Openness scales in the NEO-PI-R, overlapped across all three EPQ facets. Most of the isolated variance was captured by the psychoticism scale on the EPQ. These findings suggest that the NEO-PI-R is a measure of greater sensitivity in that factor structures are clearer with less overlapping variance. This suggests that the NEO-PI-R can be used for more precise behavioural predictions in many situations and domains over the EPQ. Similar findings have also been shown with statistical convergence of related constructs on other personality scales. On Holland's Vocational Preference Inventory (VPI) the Social and Enterprising scales correlated with Extraversion, Conventionality correlates with Conscientiousness and Investigative/Artistic scales correlate with Openness (Ackerman & Heggestad, 1997). Also the Minnesota Multiphasic Personality Inventory (MMPI) has been found to correlate with the NEO-PI-R, for example, the Anxiety and Social Discomfort scales correlated with the Neuroticism scale (Costa, Busch, Zonderman & McCrae, 1986). Thus, robust support for the validity and reliability of the NEO-PI-R as a personality assessment tool, favoured by Ones et al. (2007), has been established. However, assessment tools of the FFM, such as the NEO-PI-R, do have limitations which will now be discussed.

In the literature, the two major limitations of FFM assessment tools, such as the NEO-PI-R, concern the high face validity of test items, which may result in examinees distorting their self-reported responses (Morgeson, Campion, Dipboye, Hollenbeck, Murphy, & Schmitt, 2007). These issues are largely minimised by the authors of the article under review (Ones et al., 2007). They argued that distortion or 'faking' responses in order to appear Conscientious cannot be avoided when in a recruitment situation, especially when the assessment tool has high face validity and involves self reporting (Morgeson et al., 2007). This possibility has been illustrated in the study conducted by Furnham (1997) where Agreeableness, Conscientiousness and Neuroticism scales displayed high face validity and were open to distortion;

for example, participants distorted their responses by responding in a socially desirable manner by rating themselves highly dutiful and friendly, yet low in anxiety. Interestingly, the Openness and Extraversion scales were not significantly affected by distortion (Furnham, 1997). The criticisms of the NEO-PI-R being an invalid measure due to distortion of responses are minimised by Ones et al. (2007), in that they give preference to criterion-related predictive validity of the NEO-PI-R over the criticisms concerning distortion.

Predictive validity concerns how well a measure actually predicts the criterion of interest, for example, job performance (Ones et al., 2007). Criticisms concerning the limitations of predictive validity have focused on the method, specifically, statistical artefacts employed in the meta-analyses of those undertaken by Ones et al. (2007) and other researchers (e.g., Barrick & Mount, 1991; Morgeson et al., 2007). The meta-analysis conducted by Ones et al. (2007) found that Conscientiousness is the single best predictor of overall job performance ($p = .23$) and general task performance ($p = .15$) across all occupational groups: sales, managerial, skilled, professional, semi-skilled, customer services, and essential services. These findings are consistent with those of other meta-analytic investigations of the FFM (e.g., Barrick & Mount, 1991; Barrick, Mount, & Judge, 2001; Salgado, 1997). Recently, results from meta-analyses have been questioned in regard to the use of observed predictive validities versus corrected predictive validities. Observed predictive validities have consistently been found to range from .00 on the Openness trait, to the best predictor Conscientiousness at .15 (Barrick & Mount, 1991; Hurtz & Donovan, 2000; Morgeson et al., 2007; Ones et al., 2007; Salgado, 1997). Although the observed predictive validities show that Conscientiousness is only a slightly useful single predictor of job performance, studies into incremental predictive validities of multiple measures argue for the inclusion of Conscientiousness in recruitment settings.

Schmidt and Hunter (1998) conducted a meta-analysis on the single and incremental predictive validities of 37 historically common selection methods, for example: intelligence tests, work sample tests, experience, reference checks, and personality. These findings have established intelligence as the single best predictor of job performance (.51), which is now widely accepted (Robertson & Smith, 2001). Conscientiousness and intelligence together were found to predict .60, while intelligence and integrity tests revealed a further rise in incremental validity (.65) (Schmidt & Hunter, 1998). Notably, integrity tests have been found to be theoretically related to the FFM, for instance, they predict counter productive work behaviours such as theft and sabotage, which negatively correlate with Conscientiousness personality traits, such as

dutifulness (Marcus, Lee, & Ashton, 2007; Ones, Viswesvaran & Schmidt, 1993; Robertson & Smith, 2001, Schmidt & Hunter, 1998). Thus, the increase in the variance explained in the prediction of job performance from intelligence alone to the incremental use of personality measurements that are based on the FFM has shown to be approximately .14; this figure closely resembles the .15 suggested by Morgeson et al. (2007). These findings contrast the assertions that Conscientiousness solely predicts > .20 of job performance variance, in the reviewed article (Ones et al., 2007).

In conclusion this critique of the Ones et al. (2007) paper has developed some recommendations for organisations currently considering FFM personality assessment for recruitment and selection. Conscientiousness is a trait that is valuable for predicting job performance. However, organisations should not consider this construct as sole selection criteria and should use it in conjunction with intelligence tests and other methods to increase the validity of the selection process. Organisations may also enhance the efficiency of the recruitment and selection process by focusing on the personality construct of conscientiousness, rather than using all five components of the FFM, as conscientiousness demonstrates greater predictive validity in most cases. Researchers are also encouraged to explore the recommendations made for future research so that incremental validity of multiple methods can be better understood so that organisations can be increasingly confident in their use.

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