Personality Assessment in Personnel Selection

Michael G. Anderson, PhD

Personality assessments can be a strong predictor of job performance and oftentimes are superior to job interviews.[1] They can also demonstrate less potential for adverse impact than cognitive ability tests.[2] Therefore, it is not surprising that the use of personality assessment for personnel selection is becoming increasingly popular among organizations. In fact, 75 percent of recently surveyed organizations are currently using, or have considered using, personality assessments for executive selection and development.[3] Appropriate validated personality assessments are attractive selection tools because they provide a data-based, nonsubjective method for identifying high-potential employees who will also fit well within a particular work environment. It is critically important to note that while the term *personality assessment* is used generically, not all personality assessments are suited for personnel selection.[4] Personality assessments that measure traits are appropriate for selection purposes; measures of psychological type are not designed for, and should not be used in, selection applications. This paper will offer brief answers to questions like this that are often asked when personality assessments are used in personnel selection decisions, including

- What is personality?

- How is personality measured?

- How is personality related to job performance?

- How accurate is personality assessment in predicting job performance?

- What are the advantages of using personality assessments?

- How are personality assessments implemented in selection systems?

WHAT IS PERSONALITY?

Personality has been defined by N. Brody and H. Ehrlichman as "those thoughts, feelings, desires, intentions, and action tendencies that contribute to important aspects of individuality."[5] Think of some people you know well. Disregarding physical attributes, how would you describe them individually? Do they enjoy crowds or being alone? Do they keep a strict schedule or go with the flow? Are they self-conscious or confident? Your answers to questions such as these provide insight into their personality. Personality comprises the psychological preferences, temperaments, and predispositions that, in part, motivate and govern people's behavior. Whether they attend social functions, pursue creative endeavors, or follow a regimented schedule is determined, in part, by their personality. Indeed, other factors influence behavior (e.g., social setting, mood, recent events) as well, but personality is a major force behind individual differences in behavioral tendencies.

HOW ARE PERSONALITY MEASURES DEVELOPED?

A vast assortment of personality assessments measure an equally vast collection of personality characteristics. Each assessment, because it is developed according to the author's unique theory/ perspective, offers a different approach to personality measurement. Some common elements, however, exist across almost all approaches. Personality is a combination of internal, intangible characteristics and therefore cannot be measured directly. Instead, psychologists rely on self-reports of a person's thoughts, feelings, preferences, and/or behaviors to assess personality—that is, they ask people questions about themselves, assign numerical values to their responses, and use these values to generate a portrait of the person taking the assessment.

Each question included in a validated personality assessment will have been carefully crafted to tap a specific personality characteristic. For example, "I enjoy being the center of attention" may be one indicator of sociability or the extent to which a person is gregarious and outgoing. Single items, however, are not sufficient to assess broad personality characteristics; instead, psychologists look at the pattern of responses across several items. The goal of personality measurement is to describe individuals as they are seen by others. Responses to personality assessments help classify and differentiate individuals, providing a basis for understanding prior actions and predicting future behavior.[6]

It is important to note that not all personality assessments are created equal. Any personality assessment used in selection applications must, at a minimum, demonstrate adequate reliability and validity.[7] An assessment is considered reliable if scores remain consistent over time—that is, when an individual completes the assessment on multiple occasions, his or her score should be approximately the same each time. An assessment is considered valid if it is related to other important constructs (e.g., job performance). If a test is used to select individuals for employment, there must be validity evidence to support the accuracy and job relatedness of inferences made on the basis of scores on that assessment.

HOW IS PERSONALITY RELATED TO JOB PERFORMANCE?

How would you describe a typical accountant? Most people think of accountants as conventional and reserved. How about a typical salesperson? Usually, we think of salespeople as outgoing and ambitious. Both occupations seem to be filled, in general, with people possessing decidedly different personality characteristics. These differences are clearly illustrated by the data presented in Figure 1, in which the CPI 260® scale scores of a sample of accountants and of a sample of sales professionals are compared. The scores represent each sample's mean percentile ranking based on a normative sample of the U.S. working population. A score of 72 on a particular scale, for instance, would indicate that the sample, on average, scored higher than 72 percent of the U.S. workforce on that scale.
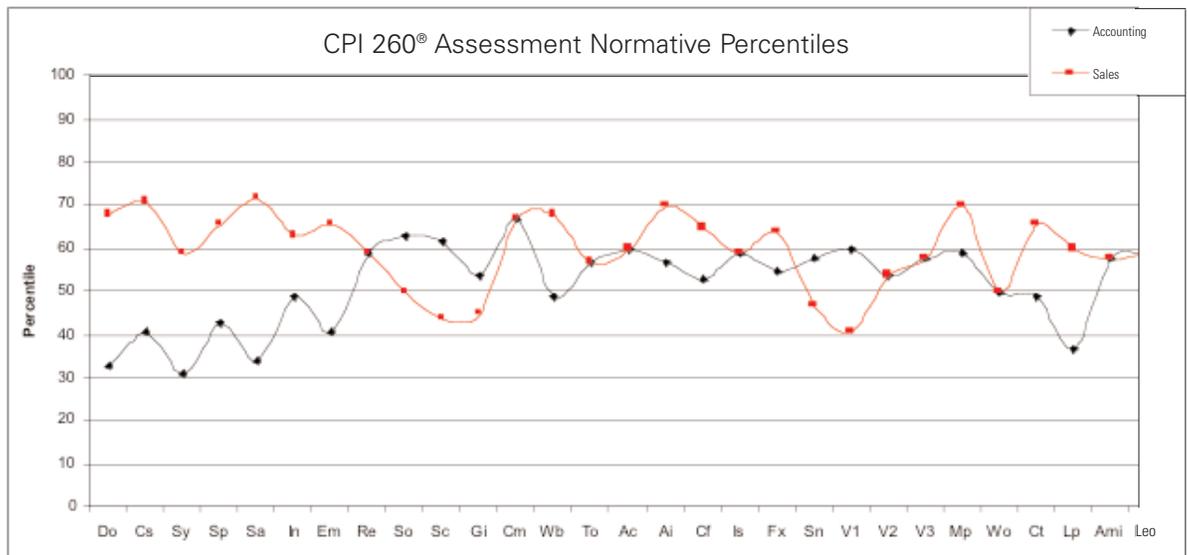
Figure 1. Accountant and Sales CPI 260® Assessment Normative Percentile Profile

Note: Accounting *n* = 168; Sales *n* = 386; Do = Dominance; Cs = Capacity for Status; Sy = Sociability; Sp = Social Pressure; Sa = Self-acceptance; In = Independence; Em = Empathy; Re = Responsibility; So = Social Conformity; Sc = Self-control; Gi = Good Impression; Cm = Communality; Wb = Well-being; To = Tolerance; Ac = Achievement via Conformance; Ai = Achievement via Independence; Cf = Conceptual Fluency; Is = Insightfulness; Fx = Flexibility; Sn = Sensitivity; V1 = vector 1 (Orientation Toward Others); V2 = vector 2 (Orientation Toward Societal Values); V3 = vector 3 (Orientation Toward Self); Mp = Managerial Potential; Wo = Work Orientation; Ct = Creative Temperament; Lp = Leadership; Ami = Amicability; Leo = Law Enforcement Orientation.

As the figure shows, significant differences exist between the accountant and sales professionals on several personality characteristics as measured by the respective scales. In general, sales professionals are more assertive (Dominance scale), enterprising (Capacity for Status scale), outgoing (Sociability scale), spontaneous (Social Presence scale), optimistic (Self-acceptance scale), cheerful (Well-being scale), entrepreneurial (Achievement via Independence scale), and comfortable with managerial authority (Managerial Potential scale). Accountants, on the other hand, are more likely to conform to societal norms (Social Conformity scale), exhibit emotional stability (Self-control scale), and value privacy (Vector 1: Orientation Toward Others).

Why are there such stark differences? The answer is relatively simple: The duties and responsibilities of each occupation (i.e., accountant vs. salesperson) require people in those roles to behave in specific ways for successful performance. Because personality helps determine preferences, temperaments, and behavior, personality influences job performance by determining whether an individual has a natural inclination for job duties and/or will enjoy the job. Certainly, other personal characteristics (e.g., cognitive ability, education, experience) also influence job performance, but personality plays an important role.

A person who is quiet and reserved (e.g., an accountant) may be uncomfortable performing duties typically associated with a sales position: presenting in front of large groups, entertaining prospective clients, or networking. Similarly, a person who is outgoing and ambitious (e.g., a salesperson) may be uncomfortable with the solitude, structure, and discipline required for preparing accounting records. In general, research confirms that workers are most effective when their personality characteristics match the job requirements.[8]

Personality also helps determine who will enjoy a job. People find the ability to express their personality intrinsically rewarding; that is, people enjoy being themselves. Therefore, people enjoy work environments that allow them to be themselves.[9] People who are quiet and reserved may be able to work in sales, but they would probably not find the work intrinsically rewarding and enjoyable. Over time, these individuals are more likely to leave in favor of a position more suited to their preferences.[10] Personality assessment can help ensure success by identifying the right individual for each work environment.

In summary, different jobs require different types of behaviors for successful performance. Personality, in part, determines who has a natural inclination for certain jobs and certain work environments. People's differing personality characteristics help determine whether they will be a good fit for a certain position. The goal of personality assessment in personnel selection is to identify which individuals, in general, will be successful performers and remain on the job.

HOW ACCURATE ARE PERSONALITY ASSESSMENTS IN PREDICTING JOB PERFORMANCE?

Personality assessment is based on statistics and probabilities. Therefore, we cannot infer, with 100 percent certainty, whether an applicant will be successful based solely on assessment scores. We can, however, make inferences about who is more likely to become a successful performer. These inferences are based, in part, on the results of validity studies. The purpose of validity studies is to demonstrate the accuracy and job relevance of assessment scores.

A common method of validating psychological assessments is to calculate correlation coefficients between assessment scale scores (e.g., Dominance, Sociability) and job performance measures (e.g., job performance ratings, sales quota achievement, etc.). Correlation coefficients are standardized continuous values that indicate the strength and direction of the relationship between two variables (e.g., assessment scale scores and job performance ratings) and range from –1.0 (strong negative relationship) to 0 (no relationship) to 1.0 (strong positive relationship).

As one example of the accuracy of personality assessment, a recent validity study by M. G. Anderson investigated the relationship between the scales of the CPI 260 tool and the performance dimensions of the *Benchmarks*® 360-degree feedback tool.[11] Personality profiles, consisting of the most predictive CPI 260 scales for each job, were developed for sales executives (including CPI 260 scales Social Presence, Amicability, Empathy, and Insightfulness) and accounting managers (including CPI 260 scales Self-control, Social Conformity, Communality, Well-being, and Amicability). The corrected correlation coefficients between fit with the sales and accounting profiles and overall performance ratings were .41 and .45, respectively.[12] To put these correlations into perspective, these relationships are virtually the same as the relationship between weight and height for U.S. adults (r = .44[13]), higher than the relationship between sleeping pills and short-term improvement in chronic insomnia (r = .30[14]), and far above the correlation between job interviews and job performance (r = .26[15]).[16] That is, the personality profile–job performance relationship in this

study is stronger than well-accepted medical procedures and a common alternate method of employee selection.

Correlation coefficients are relatively easy to interpret. To determine how much variance in job performance is explained by scores on the CPI 260 scales, simply square the correlation coefficient. Take, for instance, the correlation between the accounting manager profile and overall job performance of .45. This means that approximately 20 percent (.45 x .45 = .2025) of the difference in job performance ratings for this job is due to personality characteristics measured by the CPI 260 scales. In this validity study, further analysis revealed that sales executives and accounting managers who matched their respective personality profiles were 3.64 and 4.56 times, respectively, more likely to be a top-performing employee. Considering these results, the initial validity evidence provides strong support for the accuracy and job relatedness of inferences made from CPI 260 assessment scores for these job types.

WHAT ARE THE ADVANTAGES OF USING PERSONALITY ASSESSMENTS?

Beyond predictive validity, personality assessments offer several advantages over other types of selection tools. Perhaps most important is that, unlike other types of assessments (e.g., cognitive ability), personality assessments demonstrate little or no adverse impact; that is, they generally do not discriminate against members of protected groups or classes.[17] Cognitive ability tests, for example, have generally resulted in adverse impact on certain demographic groups.[18] This is especially troublesome given the "Uniform Guidelines on Employee Selection Procedures" requirement that alternative selection methods must be investigated in order to reduce adverse impact as long as the accompanying reduction in validity is not too large.[19] Personality and integrity tests, however, typically demonstrate only slight differences between important demographic groups (e.g., age, ethnicity, gender).[20] Therefore, personality assessments can be implemented into selection procedures as a way to increase predictive validity and reduce the potential for adverse impact.

HOW ARE PERSONALITY ASSESSMENTS IMPLEMENTED IN SELECTION SYSTEMS?

While it is important to remember that any assessment used to make personnel decisions must adhere to certain legal and professional guidelines (e.g., EEOC guidelines), personality assessment for the purpose of personnel selection generally involves a straightforward series of steps:*

1. **Conduct a job analysis.** A job analysis commonly includes one or more methods (e.g., standardized questionnaire, behavioral observation, job shadowing) of soliciting information from subject-matter experts (e.g., incumbents, supervisors) about the job requirements. The purpose of a job analysis is to identify the personal characteristics and professional competencies required for successful performance in a specific work setting. The results of the job analysis help determine the actual assessment scales that are included in the selection procedures.

*Note: The four-step process outlined here and the discussion of legal implications are specific to the United States. Applicable law and the appropriate process in other countries may differ significantly. In any event, organizations considering the use of assessments in hiring should consult counsel. This article is not intended as legal advice.

2. **Conduct a validity study.** A validity study provides empirical support for the accuracy and job-relatedness of the assessment scales. As mentioned previously, validity studies generally include correlating assessment scale scores with some form of performance criteria (e.g., supervisor ratings, sales quota achievement). In situations where local validation studies are impractical or unfeasible (e.g., too small a sample of workers or no performance criteria), validity generalization is an accepted practice.[21] Discussion of validity generalization practices is beyond the scope of this discussion; the point is that there are several options that allow for the proper validation of personality assessments for any job.

3. **Use results of the job analysis and validity study** to create a personality profile. The profile includes the personality scales that will be used to make selection decisions, specifically scales that demonstrate predictive validity of job performance, are representative of important aspects of job performance, and/or are characteristics important for successful job performance. Cutoff scores are established for each scale based on information from the job analysis and the organization's desired pass rates.

4. **Conduct adverse impact analyses** to ensure that cutoff scores do not discriminate against any protected demographic group or class. Most commonly, adverse impact is assessed by comparing mean assessment scale scores among demographic groups. If group means are not significantly different, there is no apparent adverse impact. Alternatively, the personality profile can be applied to a representative sample of the U.S. workforce to calculate pass rates for each demographic group. If the pass rate for each protected group is not less than 80 percent of the group with the highest rate, then there is no apparent adverse impact.[22]

SUMMARY

It must be stressed that personality assessments are not to be used as the sole source of information in personnel decisions. Adding other sources of information (e.g., interviews, simulations) will increase the likelihood of hiring a successful candidate. Following the steps outlined in this paper, personality assessments can be a valuable part of a legally and ethically sound selection process that can help determine whether an applicant can perform the job and/or will enjoy the job—increasing predictive validity and reducing the potential for adverse impact.

ABOUT THE AUTHOR

Dr. Michael Glen Anderson holds a PhD in industrial psychology from the University of Tulsa. In January 2007, Michael joined the staff of CPP, Inc., located in White Bear Lake, MN., as a research scientist. Michael's main responsibility is to conduct product-related research and development for a variety of CPP's world-renowned brands, including the *Myers-Briggs Type Indicator®*, *Strong Interest Inventory®*, *Thomas-Kilmann Conflict Mode Instrument,* FIRO-B, and California Psychological Inventory™ assessments.

Prior to CPP, Michael spent three years as Senior Research Consultant at Hogan Assessment Systems in Tulsa, OK. At Hogan, Michael managed several employee staffing and development projects. Prior to Hogan, he spent several years as a research assistant for the University of Tulsa directing several research initiatives relevant to personnel management.

Through his academic and professional experiences, Michael provides a wealth of knowledge concerning several personnel functions, including job analysis, selection, performance appraisal, training, team processes, organizational development, organizational survey, research design, and statistical analysis. With a specialty in employee selection, Michael has successfully implemented a number of selection systems for clients that include Fortune 100 companies.

ABOUT CPP, INC.

Since its founding in 1956, CPP, Inc., has been a leading publisher and provider of innovative products and services for individual and organizational development. CPP has been supplying reliable training solutions to businesses of all sizes, including the Fortune 500, for more than 50 years. The company's hundreds of unique offerings have been used by millions of individuals in more than 100 countries, in more than 20 languages, to help people and organizations grow and develop by improving performance and increasing understanding. Among CPP's world-renowned brands are the *Myers-Briggs Type Indicator*® (MBTI®), *Strong Interest Inventory*®, *Thomas-Kilmann Conflict Mode Instrument* (TKI), FIRO-B®, CPI 260®, and California Psychological Inventory™ (CPI™) assessments.

For more information on CPP, Inc., visit www.cpp.com

NOTES

1. Compare validity estimates from J. Hogan and B. Holland, "Using theory to evaluate personality and job-performance relations: A socioanalytic perspective," *Journal of Applied Psychology* 88 (2003), and M. A. McDaniel, D. L. Whetzel, F. L. Schmidt, and S. D. Maurer, "The validity of employment interviews: A comprehensive review and meta-analysis," *Journal of Applied Psychology* 79 (1994).

2. See J. E. Hunter and R. F. Hunter, "Validity and utility of alternative predictors of job performance," *Psychological Bulletin* 96 (1984): 72–98; and A. R. Jenson, *Bias in mental testing* (New York: Free Press, 1980).

3. See i4cp, "Psychological assessment is a key tool in executive selection." Press release, February 28, 2007, http://www.prweb.com/releases/2007/2/prweb508160.htm.

4. Personality assessments that measure traits are appropriate for selection purposes; measures of psychological type are not designed for, and should not be used in, selection applications.

5. N. Brody and H. Ehrlichman, *Personality psychology: The science of individuality* (Upper Saddle River, NJ: Prentice Hall, 1998), 3.

6. See H. G. Gough and P. Bradley, *California Psychological Inventory*™, 3rd ed. (Mountain View, CA: CPP, Inc., 1996).

7. See Equal Employment Opportunity Commission (EEOC), "Uniform guidelines on employee selection procedures," *Federal Register* 43 (1978): 38290–38315; Society for Industrial and Organizational Psychology (SIOP), "Principles for the validation and use of personnel selection procedures," 4th ed. (Bowling Green, OH: SIOP, 2003).

8. See M. R. Barrick and M. K. Mount, "The big five personality dimensions and job performance: A meta-analysis," *Personnel Psychology* 44 (1991): 1–26; J. L. Holland, "Exploring careers with a typology: What we have learned and some new directions," *American Psychologist* 51 (1996): 397–406; J. Hogan and B. Holland, "Using theory to evaluate personality and job-performance relations: A socioanalytic perspective," *Journal of Applied Psychology* 88 (2003): 100–112; and R. P. Tett, D. N. Jackson, and M. Rothstein, "Personality measures as predictors of job performance: A meta-analytic review," *Personnel Psychology* 44 (1991): 703–742.

9. See R. P. Tett and D. D. Burnett, "A personality trait-based interactionist model of job performance," *Journal of Applied Psychology* 88 (2003): 500–517.

10. See B. Schneider, "The people make the place," *Personnel Psychology* 40 (1987): 437–453.

11. See M. G. Anderson, "The validity of the CPI 260® as a predictor of performance across managerial occupations." Unpublished manuscript, 2007.

12. Correlation coefficients for sales and accounting profiles were corrected for criterion unreliability.

13. See G. J. Meyer, S. E. Finn, L. D. Eyde, G. G. Kay, et al., "Psychological testing and psychological assessment: A review of evidence and issues," *American Psychologist* 56 (2001): 128–165.

14. See G. J. Meyer, S. E. Finn, L. D. Eyde, G. G. Kay, et al., "Psychological testing and psychological assessment: A review of evidence and issues," *American Psychologist* 56 (2001): 128–165.

15. See M. A. McDaniel, D. L. Whetzel, F. L. Schmidt, and S. D. Maurer, "The validity of employment interviews: A comprehensive review and meta-analysis," *Journal of Applied Psychology* 79 (1994).

16. Correlations for the relationship between height and weight and the relationship between sleeping pills and insomnia were not corrected for unreliability. These correlations, however, do not need to be corrected because the reliability of these criteria is at or about 1.00. The correlation between interviews and job success is a meta-analytic mean estimate and was corrected for criterion unreliability.

17. See R. Hogan, "In defense of personality measurement: Old wine for new whiners," *Human Performance* 18 (2005): 331–341; L. M. Hough and F. Oswald, "Personnel selection: Looking toward the future— remembering the past," *Annual Review of Psychology* 51 (2000): 631–664; and EEOC, "Uniform guidelines on employee selection procedures," 38290–38315.

18. See J. E. Hunter and R. F. Hunter, "Validity and utility of alternative predictors of job performance." *Psychological Bulletin* 96 (1984): 72–98; and A. R. Jenson, Bias in mental testing (New York: Free Press, 1980).

19. EEOC, "Uniform guidelines on employee selection procedures," 38290–38315.

20. For personality, see L. M. Hough, F. L. Oswald, and R. E. Ployhart, "Determinants, detection, and amelioration of adverse impact in personnel selection procedures: Issues, evidence, and lessons learned," *International Journal of Selection and Assessment* 9 (2001): 152–194; for integrity tests, see D. S. Ones and C. Viswevaran, "Gender, age, and race differences on overt integrity tests: Results across four large-scale job applicant data sets," *Journal of Applied Psychology* 83 (1988): 35–42.

21. See EEOC, "Uniform guidelines on employee selection procedures," 38290–38315; Society for Industrial and Organizational Psychology (SIOP), "Principles for the validation and use of personnel selection procedures," 4th ed. (Bowling Green, OH: SIOP, 2003).

22. See EEOC, "Uniform guidelines on employee selection procedures," 38290–38315. Organizations that use any type of assessment for selection purposes should continually monitor demographic information and pass rates to conduct periodic adverse impact analyses.