



**HARRISON  
ASSESSMENTS®**

# **Harrison Assessment Validation Overview**

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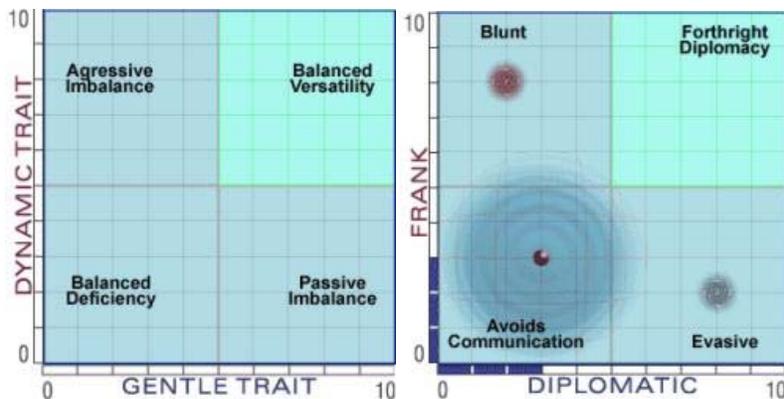
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## HARRISON ASSESSMENT VALIDATION OVERVIEW

Two underlying theories are integrated in the Harrison Assessment methodology. The first is called Enjoyment-Performance Theory and is based upon Behavioral Theory. Enjoyment-Performance Theory states that an individual will perform more effectively, be more engaged, and be more likely to be retained in a job if that individual (a) enjoys the tasks required by that job, (b) has interests that relate to the position, (c) has work environment preferences that correspond with the environment of the workplace, and (d) has employment expectations that can be met by the employer.



The second is called Paradox Theory. The Harrison Paradox Theory states that all traits can be positive or negative and by comparing the strength of a trait to a complementary trait, we can determine the impact (positive or negative) of that trait on job performance. The term *Paradox Theory* is used because complementary traits often appear to be contradictory but, in fact, they are not. A person who embraces only one side of the paradox will consider the traits to be contradictory or opposite. Imbalances create the potential for exhibiting stress behaviors when the individual is under pressure. However, a person who is strong in both traits has psychologically resolved the paradox and will consider the pair of traits to be mutually compatible. This synergistic integration of the two traits will enable the person to have a greater range of behavior, resulting in greater effectiveness and a greater sense of personal fulfillment. Therefore, paradoxical traits can be either constructive or destructive depending on the level of the complementary trait.



## THE JOB SUCCESS FORMULA

A Job Success Formula (JSF) is a comprehensive set of question and answer options that reveals the likelihood of an individual's success for a specific job. Using a mathematical formula, the answers to the set of questions are evaluated to produce a total score indicating how closely the individual comes to having the ideal behavioral patterns for the job. A Job Success Formula includes three major components: Eligibility (experience, education, and skills), Suitability (behavior and job suitability), and Interview (includes options for revising eligibility scores and entering suitability scores based upon behavioral interviewing). Other external assessment sections may be added such as skill or aptitude assessments. Job Success Formulas can be customized.

The Harrison Assessments Suitability Questionnaire measures 175 suitability traits, 30-40 of which will apply to any one job function. Harrison Assessments has Job Success Formulas that relate to more than 650 job titles, each of which offer up to four levels of experience and three levels of management. Since eligibility and suitability are different for each job level and each management level, the assessment factors are adjusted in each case making a total of over 6500 Job Success Formulas. The JSFs are based on 20 years of performance research and thus accurately reflect the behavioral requirements and scoring. The suitability formulas can be easily customized according to the specific behavioral requirements of the job.



The Harrison Assessment is a valuable resource that has a variety of organizational applications including selection, development, succession and career planning, and team building. More information about how the Harrison Assessment can be used and the resources that are available to support the technology can be found via the Harrison website, [www.harrisonassessments.com](http://www.harrisonassessments.com).

## ADMINISTRATION AND SCORING

Harrison Assessments uses a computer based administration format and takes approximately 25-30 minutes to complete. The respondent is presented with a series of 8 statements and asked to rank order the statements in order of their preferences. Once an applicant performs the rank order of those statements, he/she is presented with another series to rank order. This process continues for 18 groups of questions enabling the measurement of 175 different traits.

A Job Success Analysis Report is generated for each individual respondent. The Job Success Analysis Report shows the traits related to the job, the person's score for each trait, the impact of that score on job success, and an overall suitability score. Each of these factors is important in order to guide user interpretation of the results and prevent misinterpretation or overemphasis on any one trait.

## **EMPIRICAL EVALUATION OF THE HARRISON ASSESSMENT**

The U.S. Equal Employment Opportunity Commission (EEOC) is responsible for enforcing federal laws that make it illegal to discriminate against a job applicant or an employee based on protected group status (race, color, religion, sex, national origin), age (40 or older), and disability. The Uniform Guidelines, developed by the EEOC, are a set of principles that guide compliance with federal law prohibiting discrimination. For the Harrison Assessment, extensive validation efforts have demonstrated evidence of reliability and content, construct, and criterion-related validity. Results of reliability and validity analyses are provided in the following sections. Job specific and local validation studies are available for a low cost in order to demonstrate validity for specific circumstances.

### **RELIABILITY**

Reliability is the extent to which a test yields *consistent* scores across different assessment occasions. Overall, the Harrison Assessment demonstrates acceptable test-retest reliability and technical consistency. Test-retest reliability is obtained by administering the same test twice over a period of time to a group of individuals. The test-retest correlation coefficients for the 74 primary trait scales in the Harrison Suitability Assessment are between .80 and .94. The period between administration and re-administration of the assessment was three months. Analysis of the test-retest reliability coefficients indicates that the degree of reliability meets expected industry standards.

In addition, a technological mechanism exists within the Harrison Assessment that detects (a) levels of attention and understanding of the questions, and (b) attempts to manipulate the answers by the respondent. Any attempt to deceive the questionnaire is detected by more than 8,000 cross-references that assess the consistency of the respondent's answers. Research on the Harrison Assessment suggests that consistency scores correlate with both performance and employee turnover. In a study of 341 employees at a nationwide parcel delivery service, results suggested that those with invalid profiles (consistency scores below  $-65$ ) were much more likely to terminate before six months. In addition, those with invalid profiles were much more likely to be poor performers.

### **VALIDITY**

Validity is the extent to which a test measures what it intends to measure. Validity can be demonstrated by providing different kinds of evidence including content validity, construct validity, and criterion-related validity. Evidence of face validity, a non-psychometric type of validity, can also be helpful to assess user acceptability. The Harrison Assessment demonstrates several forms of validity evidence which demonstrates that it is appropriate for use in making employment decisions.

## **Content Validity**

Content validity refers to the extent to which a test appropriately covers relevant areas of construct (e.g., job performance) that are being measured. According to the Uniform Guidelines, content validity evidence is demonstrated by data showing that content of a selection procedure is representative of important aspects of performance on the job. The job success formulas used in Harrison Assessment were developed by subject matter experts using the Dictionary of Occupational Titles (DOT), a comprehensive document produced by the U.S. Department of Labor that groups jobs based upon their similarities and defines their structure and content (the DOT was a predecessor of O\*NET, [onetonline.org](http://onetonline.org)). These templates and formulas have been refined and updated based on over 20 years of performance research to accurately reflect the behavioral requirements of a particular position.

## **Construct Validity**

According to the Uniform Guidelines, construct validity evidence is demonstrated by data showing that the selection procedure measures the degree to which candidates demonstrate characteristics that are identified as important for successful job performance.

Independent studies have been conducted that compare Harrison Assessment traits test results to personality assessments such as the MBTI, 16PF and NEO-PI-R. Given the importance of personality in determining preferences for behavior, the Harrison Assessment should demonstrate significant correlations with personality assessments. Results show substantial relationships between test results, demonstrating convergent validity. Correlations ranging from .20 to .53 and statistically significant at the  $p < .01$  level were semantically analyzed in the validation study. Almost all of the Harrison Assessment correlations with the 16PF and MBTI were shown to be meaningful, given the analysis of the definitions of the scales. The results also provided evidence of discriminant validity evidenced by a lack of a relationship between the Harrison Assessment and 16PF's B factor which measures "scholastic mental ability" as indicated by concrete thinking vs. abstract thinking, a construct that is not measured by the Harrison Assessment.

In addition, a study was conducted comparing the Harrison Assessment to results of an Assessment Center. An Assessment Center is a comprehensive, standardized procedure wherein multiple assessment techniques, such as situational exercises and job simulations, are used to evaluate individual employees for purposes such as (a) promotion and selection, (b) transfers, (c) training and development, and (d) career planning. Results showed that more than half of the Harrison Assessment traits measured correlated significantly with Assessment Center dimensions and skill clusters, with correlation magnitudes ranging from .29-.58.

Construct validity also can be demonstrated by using factor analysis. This is a statistical method that reveals if items on a tool designed to measure the same construct or trait group together more than items designed to measure different concepts. A profiling system such as the Harrison Assessment, which is intended to be non-culture specific (e.g., Eastern vs. Western culture), should demonstrate good fit with a theoretical framework of personality, such as the Big 5 Theory of Personality. Similar to the Harrison Assessment, the Big 5 Theory of Personality is reported to cut across cultural differences. They both point out the similarities in personality domains across cultures. Harrison Assessment trait scores of 873 individuals were analyzed, using an exploratory factor analysis method. Five factors or groupings emerged and were shown to be conceptually related to the five domains of the NEO-PI-R.

## Criterion-Related Validity

Criterion-related validity refers to how well a test predicts an outcome or criterion, such as job performance and turnover. According to the Uniform Guidelines, criterion-related validity evidence is demonstrated by empirical data showing the selection procedure is predictive of, or significantly correlated with, important elements of work behavior.

Numerous local validation studies have been conducted and have demonstrated statistically significant correlations of suitability with employee performance for a wide variety of jobs. The results of these local validation studies were combined in a meta-analysis. Meta analyses provide an average estimate of effect or relationship across individual studies allowing for greater diversity among jobs and subjects. They also provide greater power to detect effects to do a larger N size than individual studies. Given these benefits, a total of 31 individual studies (N sizes of individual studies ranged from 27 to 694) were included in a meta-analysis and spanned a variety of industries and countries. The mean weighted relationship between the Harrison Assessment and job performance across jobs is estimated to be .46 for the fixed effects model and .61 for the random effects model ( $p=.000$ ). These coefficients indicate good predictive ability of the Harrison Assessment.

Research also supports the relationship between Harrison Assessment results and performance and turnover. In a study of 341 employees at a nationwide parcel delivery service company, results suggested that of the employees predicted to have probable success using Harrison Assessments, 91% were successful using manager ratings as a criterion. Of the employees predicted to have unlikely success using Harrison Assessments, 75% were poor performers based on manager ratings or did not complete 6 months in the job.

## ADVERSE IMPACT

Adverse impact occurs when the rate of selection in hiring, promotion, or other employment decisions with respect to members of a particular group is substantially different from the rate for other groups, and when this substantially different rate works to the disadvantage of members of a protected class (e.g., race, age, gender, etc.). To test for adverse impact, the Adverse Impact Ratio (AIR) was calculated and the 4/5ths Rule, also known as the 80% Rule, was applied to the Harrison Assessment. This rule, supported by the Uniform Guidelines, is used as a guideline to compare the selection rates for various groups. Results demonstrated no adverse impact across gender and racial groups. The percentage of persons “passing” the Harrison Assessments Suitability Assessment and adverse impact ratio were calculated across position categories (administration, customer service, management, professional, sales, supervisory, and technical) for four racial groups: African Americans (N=509), Caucasians (N=459), Asians (N=495), and Hispanics (N=529), as well as for men (N = 369,134) and women (N = 320,533). All adverse impact ratios were above .80 (ranges from .81-1.00).

## SUMMARY

This manual details the job relevant test construction, reliability, and validity evidence of the tool. Extensive evidence in accordance with legal and professional guidelines has been established, strongly supporting the use of the Harrison Assessment for selection or hiring purposes.

The meta-analytic results demonstrate the robustness of the tool in predicting job performance across a number of roles (representative sample studies are provided in the Appendices). In addition, the Harrison Assessment demonstrated no adverse impact across racial or gender groups, indicating that individuals in these legally protected groups would not have been disproportionately affected by employment decisions made with the tool.

While local validation studies are always recommended, the validity evidence in this manual is sufficiently generalized to support the use of the tool based on a job analysis and mapping of the traits in cases where a local validation study is not feasible.