Summary of Reliability and Validity of Harrison Assessments

The following summary description of reliability and validity factors is intended to provide an overview. For further details, contact your HA distributor for a copy of the Harrison Assessments validity document that provides over 90 pages of research.

<u>Note</u>: The reliability and validity information that follows applies to the Harrison Suitability Assessment which is one of the assessments recommended and managed in the Harrison Assessments system. The other assessment in the HA system is the HA Eligibility Assessment. The Eligibility assessment is not a part of this validity and reliability document because all eligibility assessment is unique to each company and each job. The eligibility criteria provided by Harrison Assessments is designed to enable customers to more easily create customized criteria. It lists various eligibility options related to different jobs but does not quantify those options into a formula for assessment. It is only used to stimulate ideas related to different eligibility factors that <u>could be used</u> and to provide examples of how eligibility questions and eligibility formulas should be structured. Each job requires a unique set of eligibility requirements based on company preferences related to job requirements and pay scales.

Reliability

Reliability is the extent to which a test can be duplicated multiple times and yield *consistently similar* scores. The test-retest coefficients expected of behavioral assessments are between .65 and .95.

The test-retest coefficient results of the 74 primary trait scales in the Harrison Suitability Assessment are between .80 and .94. These results indicate that the degree of reliability is within the moderately high to extremely high range as measured against expected industry standards.

Validity Overview

Validity is the extent to which a test measures what it intends to measure. Evidence of validity for tests used for employment purposes should be primarily based on research that demonstrates the relationship between a test and job performance. Consequently, the Harrison Assessment research focuses of this relationship. The Harrison Assessments research shows strong correlations with job performance.

In addition, supplementary evidence is provided by showing the relationship between the Harrison Suitability Assessment and other assessments designed to measure similar behaviors.

Content Validity

Does the Harrison Suitability Assessment represent a wide range of possible items it should cover?

The Harrison Suitability Assessment has a high degree of content validity because it measures a wide range of factors (156 traits) including motivations, personality traits, interests, work values, and work preferences. Consequently there will be 30-40 factors that will have a relationship to job

performance for any specific job. This range of items is much broader than any other assessment that we have encountered.

The aim of the Harrison Suitability Assessment is to measure a comprehensive set of suitability factors that relate to job success for any specific job. Job Suitability is approximately 50% (varies according to the job) of the factors that relate to job success and eligibility factors are approximately the other 50% (Eligibility includes work experience, education, and skills.) Consequently, Harrison Assessments has included an eligibility assessment in order to provide the appropriate context to interpret the overall results when making employment decisions. The suitability scores are intended to be considered along with an individual's level of eligibility in order to obtain a complete picture of potential for job success. In addition, an employment interview should be used to help further assess eligibility and suitability. Since suitability is only part of what needs to be measured, it is not intended to be used as the sole means of assessing job performance potential. The Harrison system provides the capability to measure eligibility and when this score is combined with the suitability score, the correlation between the overall score with performance is significantly increased.

Face Validity

Face validity is the validity of a test at face value. In other words, does it appear to measure what it is supposed to measure?

The Harrison Suitability Assessment uses a unique questionnaire methodology called the SmartQuestionnaire™. The SmartQuestionnaire™ requires the assessee to rank self-descriptive sentences in order. Scores on various traits are then calculated based on those answers. However, the suitability score is calculated based on the suitability formula which measures the traits that relate to job success for a specific job. Each job type has a different suitability formula that is based on the behavioral requirements of that job type as determined from previous research related to job performance. The trait formula used for each job suitability formula has shown significant correlations with job performance. For best results, it is highly recommended that each suitability formula is examined and minor adjustments are made according to the specific key performance indicators for the specific job.

The SmartQuestionnaire™ contains only questions that are job related and only the questions that relate to a specific job are considered when calculating the suitability score for that job. The other non-related questions serve the purpose of enabling the ranking process to be more effective.

Consequently, the trait scores as determined by the Harrison Suitability Assessment can be considered to be derived through an ipsative process due to the ranking system used. However, the suitability score is determined by the traits that have been proven to relate to job success and therefore the process includes a comparison with others related to the most important criteria – job success.

Most personality tools use a normative approach which determines a person's score on a particular trait in relation to how other people score on that trait. These norms are then used to interpret the results. However, without showing the relationship between a person's scores and job performance, serious misinterpretations frequently result. High (or low) scores on traits which have no relationship to performance are often erroneously considered as positive (or negative) results. Also, in many cases, both high and low performers could have high norms leading to the misinterpretation that a high score is good in relationship to that job.

There are two additional design features of the Harrison Suitability Assessment that support face validity and reliability.

1. In addition to psychological methods used to determine the reliability of the person's answers, there is a technological mechanism that detects levels of attention and understanding of the questions as well as attempts to manipulate the answers. Consequently, the effectiveness of test reliability is greatly increased.

2. Although the SmartQuestionnaire™ is a self-assessment, undesirable workplace behaviors are accurately identified using Paradox Technology™. The statements that are ranked are entirely positive and there are no negative questions in the questionnaire. However, potentially counter-productive behaviors are determined by analyzing the ranked relationships between the positive items. The person taking the assessment is completely unaware of those relationships. For this reason the SmartQuestionnaire™ could be called a 'blind self-assessment'. Ask your Harrison Assessments consultant for a fact sheet if you would like to know more about Paradox Technology™

Construct Validity
Does the Harrison Suitability assessment actually measure the traits we think we are measuring?

Independent studies have been done that compare the test results of the traits of the Harrison Suitability Assessment to other tests such as the MBTI, 16PF and Neo. The results show substantial relationships between test results.

In addition, the traits contained in suitability formulas that are based on performance research have a very strong correlation with the job descriptions for that job. The suitability formulas have been constructed based on performance research carried out with real employees in that job type. The performance has been rated according to objective performance measures.

Concurrent Validity

To what extent do the Harrison Suitability Assessment results correlate with performance of existing employees?

Studies have shown strong correlations with employee performance for a wide variety of jobs. Correlation coefficients are greater than .3 even without controlling for eligibility and considering the interview results. When eligibility is controlled and interview results are included, correlations are significantly higher.

Predictive Validity

Does the Harrison Suitability Assessment show results that indicate that the suitability assessment predicted job performance?

Yes. Studies have been conducted that show a significant relationship between the suitability score and job performance. These are included in the complete documentation on *validation*.

Performance Research Studies

Performance analysis compares the score of high performers in relationship to low performers and identifies the factors that differentiate the high performers from the low performers. It not only identifies the factors that generate job success, it also identifies the factors that hinder job success. It is critical to have a sample of both high and low performers in order to identify the traits.

There are normally between 25 and 40 traits in each suitability formula, all weighted differently.

We recommend that wherever possible, the suitability assessments of current employees are analyzed to ensure that the suitability formula being used correlates with the performance of the existing employees in that job.

In all cases, our research is reviewed by the companies for which it is conducted to confirm the accuracy of the system generated reports in relationship to the employee performance data.

Sample sizes are dependent on what can be obtained. We always get the largest sample size available after removing the uncontrolled variables (which often significantly reduce the sample sizes). A smaller sample with controlled variables is much better than a larger sample with uncontrolled variables.

Since the most important form of validation is the correlation with job performance, and each job has different key performance indicators, the best form of validation is to conduct a study on a specific job. Harrison Assessments conducts these studies so that our clients can confirm validity for their specific jobs. No other form of validity provides the same assurances. In this way the level of assessment accuracy can be known for the specific job, while at the same time calibrating the instrument to obtain the greatest predictability.

In our studies, we will:

Analyze the performance criteria to identify and remove uncontrolled variables. In many cases, we will provide information that significantly improves the performance measurement system.

Analyze eligibility data in order to remove the largest uncontrolled variable and improve the eligibility requirements.

Analyze the relationship of all hiring criteria to job performance and provide a formula that will enable our customers to best predict and inspire performance.

Speak with your Harrison Assessments consultant to find out more about booking performance research for your organization.
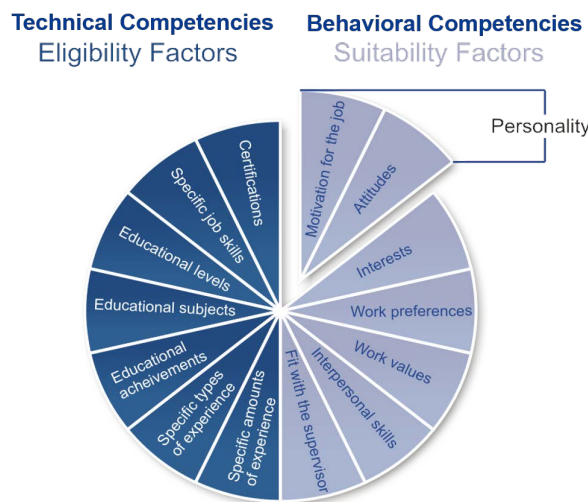
Deployed by start-ups, the INC5000 and leading organizations across the globe to build successful organizations by optimizing their people decisions and productivity

...Over 2.5 million Assessed