Validity and Reliability
of the Inventory for Work Attitude & Motivation

iWAM

SAMPLE

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Introduction

A fundamental question, when using a test of any kind, is whether the instrument is valid and reliable. In their simplest forms, validity is a measure of whether an instrument accurately measures what it purports to measure and reliability is an indication of the extent to which it will measure it the same way.

The *Inventory for Work Attitude and Motivation* (iWAM) emerged in its original form almost 20 years ago based on the work of Rodger Bailey. The rights to the original instrument were acquired by jobEQ in the late 1990s. At that time, the instrument was expanded to 40 items that measure 48 motivational and attitudinal patterns (MAPs) which are reported in 16 categories or clusters. See Appendix A for a list of the patterns, groupings, and brief definitions

This report was created to provide iWAM users and those doing research using the iWAM with a basic reference document for the instrument's validity and reliability. Unlike some tests that meet classic criteria for validity and reliability and move on, the iWAM is constantly tested through the application of it to activities such as coaching, leadership development, and models of excellence.

The iWAM as a tool for assessing motivational and attitudinal patterns has some unique challenges that tests which measure human traits such as intelligence and personality do not experience. First, many of the human constructs[1] measured such as intelligence and personality appear to form in the early stages of life and to remain relatively stable over decades.

Second, it is hard to hit a "moving target." Just as physicists learned that you cannot measure mass and velocity simultaneously, measuring human constructs such as MAPs that shift with time and context is difficult under the strict application of classic standards for reliability.

Third, the research models that define "goodness" in assessment tools and predictive studies require numbers of people, doing the same thing, being measured by the same tool with extraneous variables held constant to keep them from impacting the results. Research with the iWAM has shown that patterns related to high performance may differ in the same role even in different groups in the same corporation.

Given that an individual's motivational and attitudinal patterns that influence thinking, feeling, and actions may shift from one context to another, context is not just a *situation*—the context of "parenting" may reflect MAPs that are different than those in the context of "employee" or "work"—but also the role one plays in it. Within the context of work, there may be different MAPs reflected in the people doing the work versus those supervising those doing the work.

Anyone evaluating the iWAM's validity and reliability is advised to be aware of these differences as well as to the qualitative nature of these factors. The construction of the iWAM provides a powerful way to avoid the limitations of instruments such as values' test that use a standard Likert-type response scale. The ongoing research on the iWAM will continue to provide evidence of its validity and reliability.

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[1] One dictionary definition of a "construct" is *a model devised on the basis of observation, designed to relate what is observed to some theoretical framework.* In psychology, "construct" is the name we give to a complex concept. For example, "intelligence" is a construct. It consists of a number of different elements such as language understanding, spatial ability, ability to reason, etc. "Personality" is also a construct comprised of a variety of what we call "traits."

The iWAM and Validity

Validity is the extent to which a test accurately measures what it claims to measure. There are several ways to establish the validity of an assessment tool. In this section, we review the current status of the iWAM with regard to various measures of validity.

Face Validity

The construction of the iWAM parallels the form used by other valid assessments. In the iWAM there are 40 test questions each of which has five alternatives. The result is that there are 200 items (40 X 5) used in the computation of results. The five alternatives in a test question are ranked from "1" to "5" indicating the extent to which the statement is "like me" or "not like me." Further, since metaprograms or MAPs are anchored in language, the test items will reflect the language known to be linked to the respective patterns. (See Content Validity.)

Content Validity

The pertinent domain for the construct of MAPs or metaprograms is transformational language and neurolinguistic psychology. The domain emerged in the 1950s with Noam Chomsky's doctoral research. With the emergence of cognitive psychology in the 1970s and the definition of the construct of metaprograms, there emerged both the definition of the overall domain as well as of the language and behaviors that appeared to be associated with the metaprograms or patterns. Rodger Bailey in his initial creation of a test to measure these patterns and jobEQ in its expansion of the present iWAM paid and pay special attention to the language in the test items. The language is so important that jobEQ tends to require that a LAB Profile trainer work with a translator when creating a version of the iWAM in another language. The words and phrases in the iWAM were constructed and reviewed by experts in the field. There is strong evidence of the content validity of the iWAM.

Predictive Validity

In predictive validity you assess the test's *ability to predict something it should theoretically be able to predict*. For instance, one might theorize that a measure of math ability should be able to predict how well a person will do in quantitative courses (mathematics, engineering, etc.).

The strongest evidence of the iWAM's predictive power shows in the application of the test to Models of Excellence. In models, the iWAM is used to identify the MAPs that are related to high performance in a role in a defined context as well as the extent to which a model score will account for variance in performance ratings. The typical model will have a correlation of +.60 to +.75 and will account for 40-60% of the variance (r^2).

Concurrent Validity

Again, Models of Excellence have demonstrated the power to distinguish between high and low performers in a role. Further, applications of the iWAM in paired comparisons (two individuals' iWAMs are compared in a single report) for the purpose of coaching relationship difficulties have demonstrated extraordinary accuracy in defining behavioral differences based on MAP scores.

Convergent Validity

At this point, the most powerful evidence for convergence comes from the comparison of results of the Language and Behavior (LAB) Profile and the iWAM. Early research involving students in the LAB Profile trainer-consultant program yielded strong results. Since then, several applications confirm that the LAB Profile and the iWAM yield similar measures of metaprograms or MAPs. In fact, users of the iWAM are trained in using the LAB Profile interview questions to be able to check the validity of test results with individuals.

Discriminant Validity

Since the iWAM is not a measure of ability, the strength or weakness of a pattern is not an indication of an individual's ability to do something. For example, a low score on "Procedures" does not mean that a person cannot follow procedures (ability); it is an indication of whether the individual wants to follow procedures. When someone with a low score on the Procedures pattern is put in a position of having to follow procedures, the effect will be to de-motivate the person and/or consume an inordinate amount of energy. Again, hundreds of individual feedback sessions confirm that the iWAM will discriminate between motivation and ability.

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