

Psychometric Properties of The FIT Profiler

The FIT Profiler is the psychometric instrument that is used to collect data relating to the FIT dimensions. It has been used extensively in research studies to identify how FITness factors relate to a wide range of cognitive, decision making, social, health and performance indices. In the commercial sphere it has been used extensively in selection and assessment, and is a key tool in organisational and personal change and development.

The FIT Profiler measures core aspects of a person's thinking architecture and the nature and flexibility of their behaviour. The FIT Profiler is composed of 75 items that measure these Inner (thinking) and Outer (behavioural) dimensions. It also includes a 'lie' scale – Social Shaping – which measures the degree to which participants 'shape' their answers to give a particular impression. In addition, Professor Fletcher's Thoughts & Feelings measure is included in the Profiler to provide measures of anxiety and depression (or stress) levels.

As with any psychometric instrument it is important for The FIT Profiler to have good psychometric properties. Two key criteria in assessing psychometric properties are reliability and validity. Validity takes many forms and other Reports in this series will provide additional evidence about the validity of The FIT Profiler. This brief report will outline some of the key psychometric properties of The FIT Profiler scales and demonstrate the robustness of the instrument.

The FIT Profiler

There are three broad dimensions of FIT that are measured by The FIT Profiler:

- FIT thinking,
- FIT behaving and
- FIT emotions.

FIT thinking or Inner FITness is measured by the 5 FIT Constancies (Awareness, Balance, Conscience, Fearlessness and Self Responsibility). Each Constancy is measured by 10 items and a composite score, FIT Integrity, is computed from these.

Outer FITness or FIT behaviour is measured by 15 items. A composite score is created from the 15 items and measures overall Behavioural Flexibility.

An Overall FIT score is computed from an algorithm based on FIT Integrity and Behavioural Flexibility.

The anxiety and depression scales measure emotional FITness. Each scale is composed of 4 items.

Scale Reliabilities

Overall the scales of The FIT Profiler have shown excellent levels of reliability. Two different standard methods have been used to assess the specific scale reliabilities and each has produced sound results.

The first method assesses the internal consistency of the scale and measures the extent to which each scale item is relating to the same overall dimension – this is known as Cronbach's alpha.

The second method of reliability assesses how The FIT Profiler scores of the same people remain stable over time – this is test re-test reliability.

The reliability scores for the scales of The FIT Profiler are displayed in Table 1. Reliability scores range from 0-1 and higher scores show better reliabilities.

The Cronbach's alpha values are based on a large sample size of 1325 people and the test re-test data is based on a small sub-sample who completed The FIT Profiler on two different occasions, an average of 9 days apart.

As can be seen from the table The FIT Profiler scale reliability scores are high and the majority of these would be considered 'excellent' according to statistical benchmarks.

Table 1: FIT Profiler scale reliabilities according to Cronbach's alpha and test-retest.

FIT Dimension	Scale	Cronbach's Alpha	Test retest reliability
	Overall FIT	0.90	0.89
Thinking	Integrity	0.87	0.76
	Awareness	0.74	0.84
	Balance	0.73	0.40
	Conscience	0.77	0.81
	Fearlessness	0.87	0.77
	Self Responsibility	0.67	0.70
Behaviour	Behavioural Flexibility	0.91	0.87
Emotion	Anxiety	0.80	0.77
	Depression	0.78	0.79
	Social Shaping	0.78	0.64

Scale Validity

There are three key ways to consider the validity of The FIT Profiler.

First, since The FIT Profiler is the only psychometric instrument that measures the FIT dimensions, and was constructed for that purpose, it is *de facto* the gold standard. In this regard it is THE only perfectly valid measure of FITness.

Second, one can look at how the FIT dimensions relate to other measures that one would hypothesise be related to FITness. For example, if FITness is supposed to be a prophylactic to stress, the relevant FIT dimensions should show an association with stress susceptibility. Another prediction might be that those who score high on Self-Responsibility should take more initiative to solve problems, or make changes for the better in their life. This is called Construct Validity and other Reports in this series provide a wealth of evidence about the Construct Validity of FIT in relation to how people think and behave.

Third, one can do empirical studies using similar measures to some of the scales of The FIT Profiler and show that they do indeed appear to measure the same thing. This is Convergent Validity (a specific type of Construct Validity). Below is shown one example of this type of validity.

The anxiety and depression scales have shown excellent validity when compared to other clinical standard anxiety and depression measures such as the Depression Anxiety Stress Scale (DASS), the Trait part of the Spielberger State Trait Anxiety Inventory (STAI-T) and the Beck's Depression Inventory (BDI). Table 2 displays the relationships between these measures.

Table 2: The relationship of the FIT Profiler anxiety and depression scales to the DASS, STAI-T and BDI.

FIT Profiler	DASS	STAI-T	BDI
Anxiety	0.72	0.70	-
Depression	0.74	-	0.59

Since the thinking and behaviour scales of The FIT Profiler measure constructs that are unique to FIT Science it is more difficult to cross validate these scales to other standard measures since none exist. However the test re-test reliability data shown in Table 1 suggests good temporal stability for the scales and this enhances the validity of the measure.

Conclusions

The FIT Profiler is an excellent research and organisational tool which has good psychometric properties. It can be used to measure thinking and behaving styles in both organisational and research settings. The scores of The FIT Profiler provide an accurate reflection of a person's natural style of thinking and behaving and therefore identify areas for personal and organisational change and development. The Social Shaping scale of the FIT Profiler identifies distortions in the pattern of responding to the questions, a problem of self-protection that is often encountered with self-report data. The FIT Profiler scores can then be adjusted to account for the extent of bias and

this always ensures that FIT Profiler scores accurately reflect the true thinking and behaving styles of an individual.