

META DYNAMICS™ PROFILING TOOL

RESEARCH RELIABILITY

DEFINITION: Reliability is the extent to which test scores are consistent and relatively free of random errors of measurement. Reliability is established when test scores for a group of respondents are consistent over repeated administrations of the assessment over time. The most commonly addressed includes internal consistency and test-retest reliability.

Internal Consistency

DEFINITION: Internal consistency is the degree to which the items of a particular scale (primary characteristic) measure the construct (dimension) that the scale was designed to measure. It measures whether several items that propose to measure the same general construct produce similar scores.

Internal consistency is usually measured with Cronbach's alpha, a statistic calculated from the pair wise correlations between items. Internal consistency ranges between zero and one. A commonly accepted rule of thumb is that **an alpha of 0.6 – 0.7 indicates acceptable reliability, and 0.8 or higher indicates good reliability.**

Table 1.4 contains the internal consistency coefficients for the MDPT(i) scales based on 535 participants. The average Cronbach alpha coefficients are high for all of the scales, ranging from a “low” of -.044 and .009 (Agreeableness and Creativity) to a high of .906 (Risk Taking), with an average internal consistency coefficient of 0.607. **These results suggest good reliability.**

On further research and development, Table 1.5 presents the final reliability for the MDPT(i)'s 16 dimension and the Cronbach Alpha for the dimensions respectively. Primary characteristics that do not measure a dimension was removed, and primary characteristics that measures similar constructs were collapsed, thus resulting in 41 primary characteristics instead of 46 as per the beta version of MDPT. **These results suggest very high reliability.**

Table 1.4

Scale	Number of Items (n)	Cronbach Alpha Coefficient
Abstract	7	.378
Achieving	14	.814
Adaptable	14	.594
Affiliative	18	.656
Agreeableness*	8	-.044
Assertiveness*	2	.524
Behavioural	12	.724
Confidence*	15	.435
Conscientiousness	10	.768
Consultative	6	.404
Controlling	12	.835
Creativity	5	.009
Credible	6	.482
Curiosity*	14	.767
Data Rational	8	.630
Decisive	7	.230
Deductive Reasoning	20	.764
Detail Conscious	14	.859
Efficiency	5	.151
Evaluative	8	.206
Focus	7	.567
Forward Thinking	15	.607
Goal Setting	14	.788
Independent Minded	9	-.007
Internal Locus of Control	21	.654
Intrinsically Motivated	15	.678
Modest	14	.855
Motivator	10	.782
Openness to Experience	9	.566
Organised	15	.825
Outgoing	14	.838
Outspoken	10	.787
Perceptive	14	.675
Prepared	12	.618
Prioritisation	11	.406
Problem Solving	14	.867
Process Driven	17	.814
Resilience	38	.808
Risk Taking	14	.906
Self-Efficacy	12	.847
Social Boldness*	8	.738
Socially Confident*	14	.892
Systematic	7	.586
Time Management	15	.376
Tough Mindedness	10	.485
Variety Seeking	16	.775

**Scales removed from final version*

Table 1.5

Dimension	Number of Items (n)	Cronbach Alpha Coefficient
Visionary	75	.873
Sustained vision	26	.785
Personal strengths	88	.692
Self-Actualisation	75	.852
Strategic Thinking	50	.810
Innovation Management	24	.758
Planning	57	.841
Decision Making	52	.708
Autonomy	37	.778
Outcome Focused	119	.778
Orderliness	68	.799
Monitoring	68	.764
Mentor	40	.904
Connection	68	.776
Social Expertness	48	.894
Mindfulness	47	.753