

# META DYNAMICS™ PROFILING TOOL

## PSYCHOMETRIC PROPERTIES & RESEARCH

**DEFINITION:** Psychometrics is concerned with the scientific measurement of psychological theory and the techniques involved in psychological measurement. The psychometric structure determines the precision of a psychological inventory.

**In the process of developing the MDPT(i), normative data was collected and psychometric analyses were conducted to obtain information on its reliability and validity.** Norms are important because they establish a baseline against which people's scores can be compared. Reliability is concerned with how consistently the tool measures what it is supposed to measure, whereas validity endeavours to determine how well the tool is measuring what it claims to measure. This section provides data on the psychometric properties of the MDPT(i).

### Normative Data

**DEFINITION:** Norms are a set of average scores that are used to compare how large, representative groups of people perform on a particular survey or instrument. They serve as a benchmark to compare scores from individuals who complete the MDPT(i). This information is needed to understand how one individual's score compares to others who have completed the tool.

**The MDPT(i) was developed by collecting normative data from a relative group of 535 professional individuals from several countries including: Australia, New Zealand, and parts of Europe.** Candidates consisted largely of individuals from a diverse range of professional occupations and included students, the majority of whom were completing advanced coaching qualifications. In addition, a number of individuals had previously completed the eDISC, MBTI, and LQ assessment; providing prior experience to assessment testing.

**The following table contain the basic demographic breakdown of the normative sample.**

Table 1.1

Age by Gender of Normative Sample

Age	Females	Males	Total
Under 20	0	0	0
20 – 29	17	3	20
30 – 39	162	85	247
40 – 49	125	95	220
50 or Over	20	28	48
Total	324	211	535

Table 1.2

Occupational Group	Number (n)	Percentage (%)
Business	289	54.01
Education	52	9.72
Coaching	154	28.79
Other	40	7.48
Total	535	100

### Means & Standard Deviation

**DEFINITION:** By adding all the scores in the normative sample and dividing by the total number of scores we are able to establish the average or mean of a set of scores. Once this is set it is then important to know how much above or below the average a score falls. This involves calculating the “Standard Deviation” (SD) that measures the distribution of scores, that is, how far from the mean the scores fall. The more the scores cluster around the mean, the smaller the standard deviation.

In a normal distribution, 68.3% of the scores are within one SD above and one SD below the mean. In a similar manner to IQ tests, studies have shown that primary characteristics in personality assessments are distributed normally in the general population. This means that 68% of all scores fall within one standard deviation of the average, 95% of the scores will fall within two standard deviations of the average, and 99% of the scores will fall within three standard deviations of the average.

**The means and standard deviations shown in Table 1.3 represent the general norms used by the MDPT(i).** On the MDPT(i) model of E.S.I.P. Critical Alignment Model, the total score on all of the dimensions reflect a moderately negative skew, which means that there are less scores at the lower end of the scale. On the whole, scores on all dimensions approximate a **normal distribution**.

Table 1.3

Subscale / Dimension	Mean	SD	Skewness	Kurtosis
Visionary	91.8214	15.53742	-1.005	.562
Sustained Vision	32.1786	7.15466	-.619	-.168
Personal Strengths	99.7857	11.29194	-1.276	3.135
Self-Actualisation	95.7857	13.56017	-.100	-.741
Strategic Thinking	52.7857	10.65053	.354	-.892
Innovation Management	39.5000	4.34187	-.370	.058
Planning	39.9286	12.07976	.241	-.597
Decision Making	30.4286	3.63551	-.064	-.929
Autonomy	40.0714	5.61696	-.921	3.001
Outcome Focused	137.3214	15.78338	-1.297	2.567
Orderliness	63.8929	12.14523	.606	.171
Monitoring	60.9286	6.54290	-1.218	3.782
Mentor	32.4286	10.86083	-1.194	1.052
Connection	67.3571	10.11861	-.362	-.865
Social Expertness	45.4286	11.77703	-.814	.726
Mindfulness	52.3571	9.58090	-.199	-.105

### Standard Scores

Each scale (primary characteristic) on the MDPT(i) has a different mean and standard deviation. In order to be able to compare scores on one scale with scores on another scale, it is necessary to standardise the scores relative to their distribution on each scale.

One way of achieving this is to convert raw scores into standardised scores. Standard scores have the same mean and standard deviation and enable more accurate comparisons to be made between a score on one scale and a score on another. The standard score calculation will vary depending on the distribution of responses on each scale.

**The MDPT(i) uses a mean of 100 and a standard deviation of 15 to convert raw scores into standard scores.**

**Given that the MDPT(i) has a development focus** – that is, it focuses on how an individual can improve the quality of their behaviour – scores on the MDPT(i) are expressed as such. A standardised score (STEN score) between 1-2 are described as “**Stretch**”, scores between 3-4 as “**Opportunity**”, scores between 5-6 as “**Effective**”, scores between 7-8 as “**Strength**” and scores between 9-10 as “**Signature**”.