



The relationship between the MBTI[®] Step I Instrument and the 16PF[®] in an outplacement sample

Between September 1997 and June 2003, Rob McPherson and Lynne Hindmarch tested almost 700 people as part of outplacement interviewing and counselling using the 16PF[®]5 and the MBTI[®] Step I questionnaires. This dataset allows us to look at the relationship between the two instruments and at the characteristics of people undergoing outplacement.

This is a summary of the analysis, which has been carried out, looking at questions such as:

What characterises this outplacement sample, and how is it different from other managerial/executive/professional groups?

What is the relationship between 16PF scores and MBTI type dichotomies in a large UK sample?

What is the relationship between the 16PF and whole type?

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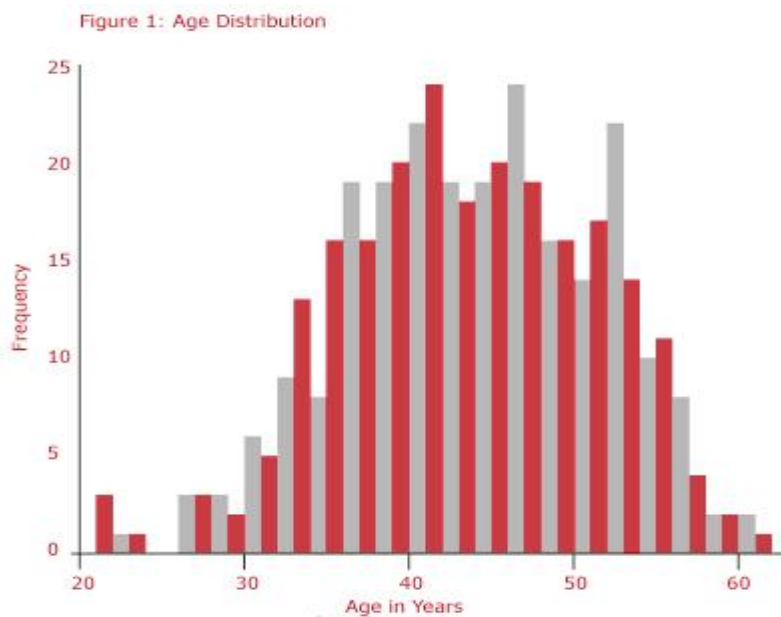
We are keen to investigate the relationship between the two questionnaires, and how they can and are used together, further. If you have any comments on this paper, or ideas or samples for further research, please contact us at marketing@opp.co.uk.



Sample

This analysis is based on a sample of 695 individuals tested by Rob McPherson and Lynne Hindmarch as part of outplacement interviewing and counselling between September 1997 and June 2003. The entire sample had completed the MBTI Step I questionnaire (or knew their MBTI type) and the 16PF (5th edition); a much smaller number had also completed a range of other instruments. This report therefore will look only at the MBTI and the 16PF.

There were 489 males and 201 females in the sample (71% and 29% respectively). Age was available for 451 people (65%), and ranged from 21 to 61 with a mean of 43 years, as shown in figure 1 below:



Not all of the data were available for all 695 people. Table 1 overleaf shows the sample available for each piece of data.



Datum	Sample Size
Gender	690
Age	451
MBTI 4-letter type	695
MBTI preference scores	395
16PF raw scores	624
16PF raw score – Impression Management	611
16PF raw score – Factor B	397
16PF sten scores	693
16PF sten score – Impression Management	669
16PF sten score – Factor B	449

The most common MBTI types were ISTJ, ESTJ, ESFJ, and ISFJ.

Summary statistics

MBTI Step 1 Results

Table 2 below shows the percentage of each type dichotomy within this outplacement group, compared with the UK general population and with a representative group of managers.

Table 2: Percentage within each Type Dichotomy.

Group	Percentage							
	E	I	S	N	T	F	J	P
Outplacement group	60	40	48	52	72	28	63	37
Managers	53	47	69	31	53	47	65	35
General population	52	48	76	24	46	54	58	42

Compared to other managers, this group is more likely to be Extravert, Intuitive and Thinking types. Table 3 overleaf shows these differences for whole type. Under-represented groups are shown in teal, over-represented in red.



Table 3: Type Table for the Outplacement Group

ISTJ N = 85 12% SSR(M) = 0.73 SSR(P) = 0.89	ISFJ N = 29 4% SSR(M) = 0.40 SSR(P) = 0.33	INFJ N = 9 1% SSR(M) = 0.50 SSR(P) = 0.76	INTJ N = 54 8% SSR(M) = 3.25 SSR(P) = 5.57
ISTP N = 26 4% SSR(M) = 0.63 SSR(P) = 0.58	ISFP N = 9 1% SSR(M) = 0.50 SSR(P) = 0.21	INFP N = 23 3% SSR(M) = 0.94 SSR(P) = 1.03	INTP N = 41 6% SSR(M) = 1.90 SSR(P) = 2.46
ESTP N = 29 4% SSR(M) = 0.71 SSR(P) = 0.72	ESFP N = 14 2% SSR(M) = 0.44 SSR(P) = 0.23	ENFP N = 39 6% SSR(M) = 0.82 SSR(P) = 0.89	ENTP N = 79 11% SSR(M) = 4.75 SSR(P) = 4.07
ESTJ N = 104 15% SSR(M) = 1.29 SSR(P) = 1.44	ESFJ N = 41 6% SSR(M) = 0.51 SSR(P) = 0.47	ENFJ N = 29 4% SSR(M) = 0.89 SSR(P) = 1.50	ENTJ N = 84 12% SSR(M) = 2.24 SSR(P) = 4.17

SSR(M): SSR compared to managers. SSR (P): SSR compared to the general population

Compared to managers,

- These types are clearly over-represented:
 - ENTP
 - INTJ
 - ENTJ
 - INTP
- These types are clearly under-represented:
 - ISFJ
 - ESFP
 - ISFP
 - INFJ
 - ESFJ

It is interesting that all the over-represented types have preferences for Intuition and Thinking, and that all the under-represented types have preferences for Feeling, with all but one having preferences for Sensing and Feeling. Are NT managers and executives happier to move on (as suggested by the findings of the UK standardisation of the MBTI Step I instrument – see Kendall, 1998)? Are SF managers more attuned to what is going on in an organisation, less likely to “rub



people up the wrong way” and therefore less likely to be made redundant? Or, given the nature of this sample, is it simply the case that of those made redundant, NT managers are more likely to take up the offer of counselling and SF managers are more likely to fall back on their own support networks?

The views of OPP community members on these questions are welcomed. It would also be useful to carry out further research – for example, on matching the results of exit interviews to personality type.

16PF Results

16PF stens were available for almost all the sample (6931); 16PF raw scores were available for 6242 people. Table 4 below shows the raw score summary statistics alongside a reference group of UK managers. Also shown is the difference in means between the two samples and the statistical significance of this difference based on an independent-samples t-test.

Table 4: 16PF Descriptive Statistics

Factor	This Group (N=624)		UK Managers (N=166)		Mean Diff ³	Sig. ⁴
	Mean	SD	Mean	SD		
A (Warmth)	14.30	4.69				
B (Reasoning)	12.73	2.07				
C (Emotional stability)	15.23	4.46	13.1	4.7	1.20	***
E (Dominance)	15.23	3.60				
F (Liveliness)	12.46	4.69	14.5	4.1	0.73	*
G (Rule-consciousness)	10.99	4.45	13.9	4.2	1.33	***
H (Social boldness)	11.82	6.07	10.5	5.3	1.96	***
I (Sensitivity)	11.72	5.28	13.4	5.2	-2.41	***
L (Vigilance)	9.14	4.26	11.2	6.3	0.62	NS
M (Abstractness)	6.67	5.11	11.5	5.7	0.22	NS
N (Privateness)	10.08	5.56	11.2	3.6	-2.06	***
O (Apprehension)	10.34	5.76	7.0	5.1	-0.33	NS
Q1 (Openness to change)	19.63	5.26	12.7	5.2	-2.62	***
Q2 (Self-reliance)	7.16	4.95	11.1	5.3	-0.76	NS
Q3 (Perfectionism)	10.36	5.05	15.9	6.2	3.73	***
Q4 (Tension)	11.16	5.03	9.3	5.5	-2.14	***
IM (Impression Management)	10.92	4.76	12.8	4.9	-2.44	***
Global Extraversion	6.35	1.97	11.0	4.7	0.16	NS
Global Anxiety	4.36	2.10	11.1	4.9	-0.18	NS
Global Tough-mindedness	5.21	1.88				
Global Independence	6.25	1.64				
Global Self-control	5.12	1.70				

Compared to managers, this group saw themselves as significantly more:

- Open to change (Q1)

¹ 685 for global scores, 669 for impression management, 449 for factor B.

² 611 for impression management, 397 for factor B.



- Lively (F)
- Dominant (E)
- Warm (A)

And as significantly less

- Private (N)
- Perfectionist (Q3)
- Rule conscious (G)
- Self-reliant (Q2)
- Vigilant (L)

These results are somewhat different to those of an earlier US study comparing outplaced executives with employed executives (Austin and Murray, 1993). This agreed with the current study in that this outplacement sample were more Dominant (E), but disagreed in that they were less Warm (A). This outplacement sample were also more Abstract (M) and Apprehensive (O) than employed executives, two factors which did not show any significant differences in our sample. The 1993 group did complete the 4th edition of the 16PF, which will have had some impact on the results.

It is, of course, open to question whether the current sample was (for example) more open to change because they had to be given their current situation, or because this was a contributory factor to their taking redundancy in the first place. Taking the MBTI and 16PF results together, the relatively larger number of NTs in the sample fits well with the higher Q1, lower Q3, lower G, and to some extent higher E and lower N. It does seem at odds with the lower Q2 and L, and to some extent the higher A of this group.

Caution is needed in interpreting these results, as different sets of managers from different general population samples have been used to look at the MBTI and the 16PF. It may be, however, that there are situational reasons for some of these 16PF results. Are those who, for example, are less vigilant and more trusting more likely to find themselves in a redundancy situation?

The results are presented graphically in figure 2 below.



Results and analysis

Discusses:

- Significant Differences by Type Dichotomy
- Extraversion-Introversion
- Sensing – Intuition
- Thinking-Feeling
- Judging – Perceiving
- Correlation of MBTI Continuous Scores with the 16PF
- The Relationship of Whole Type to the 16PF

Related articles:

- The Relationship of Personality to Gender and Age
- The Relationship between the MBTI and the 16PF



Conclusions

This is a relatively brief description of the results of analysis on one outplacement sample who completed both the MBTI Step 1 and 16PF questionnaires. As such, the results should be treated with caution. A number of useful findings have, however, emerged.

Compared with other managers, this group are more likely to have a preference for Extraversion, Intuition and Thinking, with the most over-represented types being NT (INTJ, INTP, ENTP, ENTJ).

In 16PF terms, they are on average more Open to change (Q1), Lively (F), Dominant (E), Warm (A) and less Private (N), Perfectionist (Q3), Rule Conscious (G) Self-reliant (Q2) and Vigilant (L) than other managers.

It can be speculated as to whether these personality characteristics are in part a cause or in part a consequence of them being in a redundancy situation. Further research to clarify this issue would be useful; for example, comparing the personality of redundant and non-redundant managers within the same organisation, comparing those who choose help with outplacement with those who do not, or matching the results of exit interviews to personality type. Ideas from OPP community members are welcomed.

Comparing Type dichotomies to the 16PF, it can be seen that:

- Extraverts are significantly more Socially bold (H), Lively (F), Warm (A), Dominant (E), Extravert and Independent than Introverts. Introverts are more Private (N) and Self-reliant (Q2).
- Sensing types are more Perfectionist (Q3), Tough-minded and Self-controlled than Intuitives. Intuitive types are more Open to change (Q1) and Abstract (M).
- Thinking types are more Tough-minded than Feeling types, who are on average more Sensitive (I), Warm (A) and Apprehensive (O).
- Judging types are more Perfectionist (Q3), Rule-conscious (G) and Self-controlled than Perceiving types. Perceiving types are more Abstract (M).

Similar results are found when MBTI continuous scores are correlated with 16PF scores. The pattern of the results is broadly similar to that shown from earlier data.

A number of hypotheses were made about the relationship of whole type to the 16PF; the majority (60%) were supported.

Looking in more detail at how whole type relates to the 16PF factors, there is often an extremely neat "fit". These results support the views of MBTI practitioners that it is useful to look at whole type, rather than just at the four type dichotomies separately.



This has implications for research with the MBTI. Too often variables are simply correlated with MBTI continuous scores, a process which ignores both the discontinuous nature of type dichotomies and the importance of whole type. Some new graphical ways of presenting the relationship between whole type and the 16PF were used, and OPP would welcome feedback from members of the OPP community as to how useful they found these.

Looking at gender differences, men are more likely than women to be Thinking types and women more likely than men to be Extraverts. On the 16PF, men tend to be more Tough-minded, and women tend to be more Sensitive (I), Warm (A) and Apprehensive (O). The gender differences in this group are, however, smaller than the differences between the group as a whole and the general population.

Introverts are as a group slightly older than Extraverts, although the difference is small in absolute terms. On the 16PF, older people tended to be more Self-reliant (Q2) and less Lively (F), Warm (A), Extravert and Sensitive (I).



References

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³ Raw score difference between this sample and UK managers. Negative values indicate a higher score for UK managers.

⁴ Based on an independent-samples T-test. *** - sig at 0.1% level; ** sig at 1% level; * sig at 5% level.

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