Technical Brief for the

MBTI® European Step I™ and Step II™ Assessments

Turkish

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INTRODUCTION

The *Myers-Briggs Type Indicator®* (MBTI®) instrument is one of the most commonly used personality assessments in the world. Because administration of the instrument outside the United States is growing rapidly, new translations are continually being developed for use in specific regions. This technical brief summarizes the initial measurement properties of a translation of the MBTI European Step I™ and Step II™ assessments developed for Turkey. To that end, it examines the reliability of the Turkish translation of the MBTI Step I and Step II assessments, reports on type distribution in a sample of participants who completed the instrument in Turkish, and provides comparisons with the U.K. National Representative Sample (NRS) to examine similarities and differences between the groups.

THE MBTI® ASSESSMENT

The MBTI assessment uses a typology composed of four pairs of opposite preferences, called *dichotomies:*

- Extraversion (E) or Introversion (I)—where you focus your attention and get energy
- Sensing (S) or Intuition (N)—how you take in information
- Thinking (T) or Feeling (F)—how you make decisions
- Judging (J) or Perceiving (P)—how you deal with the outer world

The MBTI assessment combines an individual's four preferences—one preference from each dichotomy, denoted by its letter—to yield one of the 16 possible personality types (e.g., ESTJ, INFP, etc.). Each type is equally valuable, and an individual inherently belongs to one of the 16 types. This model differentiates the MBTI assessment from most other personality instruments, which typically assess personality traits. Trait-based instruments measure how much of a certain characteristic people possess. Unlike the MBTI assessment, those instruments usually consider one "end" of a trait to be more positive and the other to be more negative.

TURKISH SAMPLE

Following the translation of the MBTI assessment into Turkish, a sample of participants was obtained for this study. It is important to note that this Turkish sample is not a representative sample; rather, it is a sample of convenience. Therefore, no inferences may be drawn about the preferences or type distribution of the population that understands and uses Turkish. The data reported in this technical brief should be used for psychometric information purposes only.

Sample Description

This sample is composed of 272 individuals who each completed the MBTI®—Global Research version of the assessment in Turkish. This version of the assessment includes 230 MBTI items and contains the current commercial versions of the MBTI assessment (the Form M, Form Q, and European Step I and Step II assessments). The sample includes 47% women and 53% men. Respondents' ages ranged from 20 to 54 years (mean = 32.6, *SD* = 6.3); 76% were employed full-time, 1% part-time, and 23% did not provide employment status. Thirty-seven percent reported their occupation level as employee, 15% middle management, 12% upper middle management, 4% senior executive, 4% first-level management/supervisor, 3% other, and <1% top level; 25% did not report occupation level.

As shown in Table 1, the most frequently occurring reported type for this sample is ESTJ (32.7%), followed by ENTJ (31.6%). The least common reported types are INFP (0.0%) and ISFP (0.4%). Self-selection ratios (SSRs) were computed by comparing the percentage of each type in the Turkish sample to that in the U.K. National Representative Sample (Kendall, 1998). In this sample, ENTJs are almost 11 times more prevalent than in the U.K. population. On the other hand, INFPs, ISFJs, ISFPs, and ESFPs are less common in the Turkish sample than in the U.K. sample. Again, since this Turkish sample is not representative of the general population, no inferences should be made about the population's distribution of type.

TABLE 1. REPORTED TYPE DISTRIBUTION IN THE TURKISH SAMPLE

SENSING		INTUITION	
Thinking	Feeling	Feeling	Thinking
ISTJ *n* = 25 9.2% SSR = 0.67	**ISFJ** *n* = 3 1.1% SSR = 0.09	**INFJ** *n* = 4 1.5% SSR = 0.87	**INTJ** *n* = 17 6.3% SSR = 4.46
ISTP *n* = 5 1.8% SSR = 0.29	**ISFP** *n* = 1 0.4% SSR = 0.06	**INFP** *n* = 0 0.0% SSR = 0.00	**INTP** *n* = 4 1.5% SSR = 0.61
ESTP *n* = 6 2.2% SSR = 0.38	**ESFP** *n* = 3 1.1% SSR = 0.13	**ENFP** *n* = 7 2.6% SSR = 0.41	**ENTP** *n* = 10 3.7% SSR = 1.31
ESTJ *n* = 89 32.7% SSR = 3.15	**ESFJ** *n* = 8 2.9% SSR = 0.23	**ENFJ** *n* = 4 1.5% SSR = 0.53	**ENTJ** *n* = 86 31.6% SSR = 10.90

INTROVERSION — Judging / Perceiving

EXTRAVERSION — Perceiving / Judging

Note: N = 272.

For a portion of the sample, best-fit type was also available. As shown in Table 2, the most frequently occurring best-fit type for this sample is ESTJ (17.8%), followed by ESFJ (13.9%). The least common types are INFJ (0.0%) and ESTP (1.0%).

Table 3 shows the number and percentage of respondents for each possible number of preference matches (0–4) between the four letters of their reported type and those of their best-fit type. Most respondents had three matches (34.7%) or four matches (32.7%).

TABLE 2. BEST-FIT TYPE DISTRIBUTION IN THE TURKISH SAMPLE

	SENSING		INTUITION	
	Thinking	Feeling	Feeling	Thinking
Judging / Introversion	**ISTJ** n = 7 6.9% SSR = 1.93	**ISFJ** n = 3 3.0% SSR = 0.34	**INFJ** n = 0 0.0% SSR = 0.00	**INTJ** n = 4 4.0% SSR = 1.95
Perceiving / Introversion	**ISTP** n = 7 6.9% SSR = 1.71	**ISFP** n = 4 4.0% SSR = 0.26	**INFP** n = 4 4.0% SSR = 0.76	**INTP** n = 3 3.0% SSR = 1.70
Perceiving / Extraversion	**ESTP** n = 1 1.0% SSR = 2.36	**ESFP** n = 8 7.9% SSR = 0.62	**ENFP** n = 11 10.9% SSR = 0.47	**ENTP** n = 5 5.0% SSR = 1.28
Judging / Extraversion	**ESTJ** n = 18 17.8% SSR = 1.60	**ESFJ** n = 14 13.9% SSR = 0.36	**ENFJ** n = 5 5.0% SSR = 0.73	**ENTJ** n = 7 6.9% SSR = 1.60

Note: N = 101.

TABLE 3. PREFERENCE MATCHES BETWEEN REPORTED AND BEST-FIT TYPE

Number of Preference Matches	Number of Respondents	Percentage of Total
4	33	32.7
3	35	34.7
2	26	25.7
1	6	5.9
0	1	1.0

Note: N = 101.

TABLE 4. PREFERENCE DISTRIBUTIONS FOR THE TURKISH SAMPLE AND THE U.K. NATIONAL REPRESENTATIVE SAMPLE				
	Turkish Sample (N = 169)		U.K. National Representative Sample (N = 1,634)	
Preference	n	%	n	%
Extraversion (E)	213	78.3	854	52.6
Introversion (I)	59	21.7	780	47.4
Sensing (S)	140	51.5	1,250	76.5
Intuition (N)	132	48.5	384	23.5
Thinking (T)	242	89.0	750	45.9
Feeling (F)	30	11.0	884	54.1
Judging (J)	236	86.8	952	58.3
Perceiving (P)	36	13.2	682	41.7

Note: Source for the U.K. National Representative Sample is Kendall (1998).

TABLE 5. DICHOTOMY INTERNAL CONSISTENCY RELIABILITIES FOR THE TURKISH SAMPLE AND THE U.K. NATIONAL REPRESENTATIVE SAMPLE		
	Turkish Sample	U.K. National Representative Sample
Dichotomy	Cronbach's Alpha	Cronbach's Alpha
E–I	.84	.84
S–N	.71	.80
T–F	.74	.81
J–P	.79	.82

Note: Source for the U.K. National Representative Sample is Kendall (1998).

Table 4 shows the number and percentage of respondents for each reported type preference. Also included for reference are the number and percentage of respondents for each preference in the U.K. National Representative Sample (Kendall, 1998).

RELIABILITY OF THE STEP I™ PREFERENCES

The internal consistency reliabilities (Cronbach's alphas) for the Turkish sample and the U.K. National Representative Sample are reported in Table 5. The reliabilities of the four

dichotomies are good for the Turkish sample, and are very similar to those reported in the *MBTI® Step I™ Manual Supplement,* European English edition (Kendall, 1998).

PREDICTION RATIOS

Prediction ratios measure the likelihood that a person choosing a certain response to an MBTI item will in fact have the preference indicated by that response (Myers et al., 1998). Prediction ratios for the Turkish sample are reported in Table 6.

TABLE 6. PREDICTION RATIOS FOR THE TURKISH SAMPLE

Item Code	ESTJ Prediction Ratio	INFP Prediction Ratio	Item Code	ESTJ Prediction Ratio	INFP Prediction Ratio
EI1	.60	.65	SN13	.73	.58
EI2	.74	.87	SN14	.61	.70
EI3	.70	.97	SN15	.70	.62
EI4	.89	.62	SN16	.67	.57
EI5	.88	.66	SN17	.53	.69
EI6	.54	.55	SN18	.53	.51
EI7	.71	.70	SN19	.71	.62
EI8	.59	.67	TF1	.77	.52
EI9	.57	.69	TF2	.69	.83
EI10	.54	.70	TF3	.76	.76
EI11	.77	.82	TF4	.64	.60
EI12	.69	.72	TF5	.93	.64
EI13	.74	.87	TF6	.57	.72
EI14	.71	.70	TF7	.69	.57
EI15	.63	.71	TF8	.63	.56
EI16	.68	.79	TF9	.81	.75
EI17	.81	.90	TF10	.63	.90
EI18	.81	.72	TF11	.62	.72
EI19	.67	.72	TF12	.67	.83
EI20	.82	.79	TF13	.78	.81
EI21	.55	.58	TF14	.77	.58
EI22	.77	.62	TF15	.82	.78
EI23	.71	.64	TF16	.54	.54
EI24	.70	.89	TF17	.70	.64
EI25	.61	.83	TF18	1.00	.53
SN1	.81	.68	TF19	.64	.90
SN2	.64	.57	TF20	.59	.76
SN3	.53	.61	TF21	.87	.72
SN4	.60	.73	TF22	.67	.71
SN5	.77	.64	TF23	.66	.73
SN6	.80	.62	TF24	.71	.54
SN7	.64	.65	JP1	.72	.88
SN8	.74	.73	JP2	.56	.56
SN9	.55	.82	JP3	.69	.72
SN10	.58	.84	JP4	.60	.78
SN11	.79	.70	JP5	.76	.78
SN12	.70	.70	JP6	.83	.73

(cont'd)

FACTOR ANALYSIS

Several studies have conducted confirmatory factor analyses of the MBTI assessment to assess the validity of the factors of the MBTI assessment. They have indicated that a four-factor model, such as the one theorized and developed by Myers, is the most appropriate and offers the best fit (Harvey, Murry, & Stamoulis, 1995; Johnson & Saunders, 1990). A principal components exploratory factor analysis with varimax rotation was conducted using the item responses from the Turkish sample. The results are presented in Table 7. The shaded cells indicate that factor 1 is E–I, factor 2 is J–P, factor 3 is T–F, and factor 4 is S–N. The four-factor structure produced by this analysis shows that the Turkish MBTI European Step I items are measuring their intended constructs, the four dichotomies.

| TABLE 7. FACTOR ANALYSIS ROTATED COMPONENT MATRIX FOR THE TURKISH SAMPLE | | | | | | | | |
Item Code	Factor 1 (E–I)	Factor 2 (J–P)	Factor 3 (T–F)	Factor 4 (S–N)	Item Code	Factor 1 (E–I)	Factor 2 (J–P)	Factor 3 (T–F)	Factor 4 (S–N)
EI1	.31	.11	−.27	.24	EI14	.44	−.06	−.12	.04
EI2	.66	.02	.01	−.10	EI15	.46	−.05	.11	.10
EI3	.65	.06	.03	.11	EI16	.44	.14	.20	−.14
EI4	.41	−.04	−.06	−.14	EI17	.71	.14	.12	−.03
EI5	.54	.11	.17	−.02	EI18	.59	.04	.04	−.08
EI6	.19	−.17	−.05	.17	EI19	.38	.06	−.15	−.03
EI7	.37	.06	.00	.04	EI20	.56	.02	.11	−.11
EI8	.31	.10	.15	−.13	EI21	.22	.03	−.19	.15
EI9	.37	−.12	−.02	.07	EI22	.44	.10	−.14	.17
EI10	.18	.19	−.16	.09	EI23	.33	.02	.04	.12
EI11	.65	.08	−.12	−.22	EI24	.58	.16	−.06	−.18
EI12	.42	.04	.14	−.02	EI25	.42	.14	.31	.02
EI13	.64	.17	−.13	−.15					

(cont'd)

Item Code	Factor 1 (E–I)	Factor 2 (J–P)	Factor 3 (T–F)	Factor 4 (S–N)	Item Code	Factor 1 (E–I)	Factor 2 (J–P)	Factor 3 (T–F)	Factor 4 (S–N)
SN1	−.08	.00	−.07	.48	TF13	.10	.12	.52	−.05
SN2	−.07	.00	.02	.37	TF14	−.19	.10	.33	−.14
SN3	.14	.04	.09	.15	TF15	.07	.12	.55	.18
SN4	.02	.18	.20	.37	TF16	−.04	.20	.16	−.35
SN5	−.02	.10	−.11	.48	TF17	−.24	.14	.13	.13
SN6	−.22	.10	−.12	.40	TF18	−.04	−.07	.19	.05
SN7	.11	.07	.07	.35	TF19	−.04	.34	.38	−.10
SN8	−.06	.05	−.09	.51	TF20	.23	.09	.23	−.07
SN9	.12	.32	.24	.42	TF21	−.16	.06	.52	.08
SN10	.05	.18	.10	.53	TF22	.08	.07	.52	−.23
SN11	−.13	.09	.02	.54	TF23	−.02	.20	.33	−.06
SN12	−.05	.12	.07	.46	TF24	−.05	−.15	.25	−.04
SN13	−.22	−.03	−.44	.30	JP1	.03	.65	−.02	−.11
SN14	.05	.20	−.12	.48	JP2	−.17	.09	−.09	.04
SN15	.11	−.19	−.05	.40	JP3	.11	.31	−.01	.22
SN16	−.14	−.05	−.10	.31	JP4	.09	.35	.06	−.09
SN17	.23	.11	−.16	.20	JP5	.01	.55	.11	.07
SN18	−.32	−.02	.19	−.07	JP6	.13	.46	−.06	.05
SN19	−.05	−.01	−.42	.23	JP7	−.04	.55	−.06	−.01
TF1	−.17	−.14	.24	.19	JP8	−.07	.58	.21	.03
TF2	.06	.22	.45	.09	JP9	.17	.59	.03	.07
TF3	.05	.23	.54	.00	JP10	−.28	.17	−.06	.12
TF4	−.03	.00	.31	−.05	JP11	.08	.46	.10	.06
TF5	.03	.12	.44	.06	JP12	.05	.44	.22	.12
TF6	.02	.34	.15	−.14	JP13	.01	.55	.04	.29
TF7	.01	−.09	.29	−.06	JP14	−.01	.68	.10	.09
TF8	−.16	.09	.15	−.04	JP15	−.04	.65	.07	.20
TF9	.07	.18	.62	.01	JP16	.08	.32	.09	.10
TF10	.06	.27	.33	.19	JP17	−.12	.50	.11	.07
TF11	.13	.01	.18	−.23	JP18	.02	.39	.10	.10
TF12	.06	.19	.34	.14	JP19	.07	.55	−.14	−.02

Step II™ Facets	Turkish Sample Cronbach's Alpha	U.K. National Representative Sample Cronbach's Alpha
E–I Facets		
Initiating–Receiving	.83	.90
Expressive–Contained	.67	.84
Gregarious–Intimate	.62	.77
Active–Reflective	.71	.81
Enthusiastic–Quiet	.75	.81
S–N Facets		
Concrete–Abstract	.59	.83
Realistic–Imaginative	.70	.82
Practical–Conceptual	.44	.64
Experiential–Theoretical	.60	.86
Traditional–Original	.66	.80
T–F Facets		
Logical–Empathetic	.76	.87
Reasonable–Compassionate	.74	.82
Questioning–Accommodating	.50	.58
Critical–Accepting	.30	.61
Tough–Tender	.57	.83
J–P Facets		
Systematic–Casual	.79	.82
Planful–Open-Ended	.72	.87
Early Starting–Pressure-Prompted	.58	.80
Scheduled–Spontaneous	.65	.85
Methodical–Emergent	.58	.76

Note: Source for the U.K. National Representative Sample is Quenk, Hammer, and Majors (2004).

RELIABILITY OF THE STEP II™ FACETS

The MBTI European Step II assessment includes the 87 items that make up the MBTI European Step I assessment (measuring the four dichotomies E–I, S–N, T–F, and J–P) plus another 79 items that are used only to measure the Step II facets. For each of the four dichotomies there are five facets (see Table 8), yielding a total of 20 facets.

These facets help describe some of the ways in which each preference can be different for each individual to create a richer and more detailed description of an individual's behavior. The remaining analyses focus on the evaluation of the Step II facets.

Internal consistency reliabilities for each facet are reported in Table 8 for the Turkish sample and the U.K. National Representative Sample. The Turkish sample alphas range from .30 (Critical–Accepting) to .83 (Initiating–Receiving).

Overall, some of this sample's alphas are slightly lower than those of the U.K. sample. This is consistent with the reliabilities that have been found for other translations of the MBTI Step II (or Form Q in the U.S.) assessment (Quenk, Hammer, & Majors, 2004; Schaubhut, 2008; Schaubhut & Thompson, 2010a; Schaubhut & Thompson, 2010b). Reliabilities for eight other translations can be found in the *MBTI® Step II™ Manual,* European edition (Quenk et al., 2004).

CONCLUSION

The analyses reported here with an initial Turkish sample demonstrate that the translation and measurement properties of the assessment are adequate. Therefore, translations of the MBTI European Step I and Step II assessments can be widely used with individuals who understand Turkish. As the MBTI assessment continues to grow, larger and more diverse samples will become available and the measurement properties of the MBTI European Step I and Step II assessments will continue to be evaluated.

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