

# **Poland (Polish)** Technical Brief for the **MBTI® Global Step I™** and **Step II™ Assessments**

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### **INTRODUCTION**

The Myers-Briggs Type Indicator® (MBTI®) assessment is one of the most commonly used personality instruments in the world. Because administration of the assessment outside the United States is growing rapidly, new translations are continually being developed for use in specific regions. This technical brief summarizes the measurement properties of translations of the MBTI° Global Step I<sup>®</sup> and Step II<sup>®</sup> assessments developed for areas where Polish is read and understood. To that end, it reports on type and preference distributions in a sample of people who completed the global research version (GRV) of the MBTI assessment in Polish (i.e., the Polish sample), explores similarities and differences between the Polish sample and the global sample, and examines the reliability and validity of the Polish translations of the Global Step I and Step II assessments. For more information on the global sample and construction and translation of the global assessments, see chapter 7 of the MBTI<sup>®</sup> Manual for the Global Step I<sup>™</sup> and Step II<sup>™</sup> Assessments (Myers, McCaulley, Quenk, & Hammer, 2018).

### THE MBTI<sup>®</sup> MODEL

The MBTI assessment measures a typology composed of four pairs of opposite preferences, or preference pairs:

- Extraversion (E) or Introversion (I)—how individuals direct and receive energy
- Sensing (S) or Intuition (N)—how individuals take in information
- Thinking (T) or Feeling (F)—how individuals decide and come to conclusions
- Judging (J) or Perceiving (P)—how individuals approach the outside world

The MBTI assessment combines an individual's four preferences—one preference from each preference pair, denoted by its letter—to yield one of 16 possible personality types (e.g., ESTJ, INFP). Each type is equally valuable, and an individual inherently sorts into 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 trait a person possesses. Unlike the MBTI assessment, those instruments usually consider one end of a scale to signify positive characteristics and the other to signify negative characteristics.

### **DESCRIPTION OF THE POLISH SAMPLE**

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

The Polish sample is composed of 271 individuals who each completed the MBTI GRV in Polish. The MBTI GRV comprises 230 MBTI items, including items from the commercial forms of the MBTI assessment—Form M and Form Q, and European Step I<sup>®</sup> and Step II<sup>®</sup> assessments that were current at the time the GRV was developed. The Global Step I and Step II assessments contain a subset of the 230 items used on the GRV form.

Table 1 provides demographic data. Of the sample, 54% are women and 46% are men. Participants' ages range from 16 to 60 years (mean = 31.0; standard deviation = 9.4). All participants in the sample live in Poland.

#### Table 1 | Demographic summary: Polish sample

Demographic	Sample %
Age	
Mean age: 31 years	
Gender	
Female	54
Male	46
Employment status	
Working full-time	44
Working part-time	6
Self-employed	7
Unemployed	6
Retired	<1
No response	38
·····	
Occupational level	
Employee	20
First-level management / supervisor	8
Middle management	5
Upper middle management	<1
Senior executive	9
Top level	4
Other	12
No response / not applicable	41
Job type	
Sales, customer service	12
Finance	11
HR, training, guidance	5
Administrative or secretarial	3
Health, social services	2
Education	2
IT	2
Other business services	5
Other private sector	4
Other	14
No response	39
Country of residence	
Poland	100

*Note:* N = 271. Percentages in a given category may not total 100% due to rounding of decimals.

#### **MBTI° Type and Preference Distributions**

As shown in table 2, the most frequently occurring type for this sample is ESTJ (25.1%), followed by ENTJ (13.7%). The least common types are ISFP (0.7%) and ISFJ (1.5%).

Table 3 shows the number and percentage of participants with each preference. Also included for reference are the number and percentage of participants in the global sample who have each preference.

Table 2	Reported	MBTI° type	distribution:	Polish sample
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Sei	nsing	Intu	ition		
Thinking	Fee	ling	Thinking		
<b>ISTJ</b> n = 35 12.9%	<b>ISFJ</b> n = 4 1.5%	<b>INFJ</b> n = 7 2.6%	<b>INTJ</b> n = 14 5.2%	Judging	Introv
<b>ISTP</b> n = 7 2.6%	<b>ISFP</b> n = 2 0.7%	<b>INFP</b> n = 5 1.8%	<b>INTP</b> n = 9 3.3%	Perceiving	Introversion
<b>ESTP</b> n = 17 6.3%	<b>ESFP</b> n = 6 2.2%	<b>ENFP</b> <i>n</i> = 19 7.0%	<b>ENTP</b> <i>n</i> = 16 5.9%	iving	Extrav
<b>ESTJ</b> n = 68 25.1%	<b>ESFJ</b> n = 6 2.2%	<b>ENFJ</b> n = 19 7.0%	<b>ENTJ</b> n = 37 13.7%	Judging	Extraversion

Note: N = 271.

### Table 3 | Reported MBTI° preference distributions:Polish and global samples

		olish nple		obal nple
Preference	n	%	n	%
Extraversion (E)	188	69.4	7,251	43.2
Introversion (I)	83	30.6	9,522	56.8
Sensing (S)	145	53.5	11,321	67.5
Intuition (N)	126	46.5	5,452	32.5
Thinking (T)	203	74.9	9,128	54.4
Feeling (F)	68	25.1	7,645	45.6
Judging (J)	190	70.1	8,021	47.8
Perceiving (P)	81	29.9	8,752	52.2

Note: Polish sample, N = 271; global sample, N = 16,773.

### MBTI<sup>®</sup> GLOBAL STEP I<sup>®</sup> ASSESSMENT RESULTS FOR THE POLISH SAMPLE

The Global Step I assessment contains 92 items used to help determine individuals' personality type. It replaces the Form M assessment and the European Step I assessment and was the outcome of the GRV research.

# Table 4 | Relationships between MBTI\* GlobalStep I\* and European Step I\* preference pairresults: Polish sample

	Global Step I <sup>®</sup> and Eu preference pa	
Preference pair	Correlation between continuous scores	Agreement rate (%)
E-I	.91	92
S–N	.90	87
T-F	.91	90
J-P	.89	82
Overall agreement	rate for whole types	49

Note: N = 271.

### Relationships Between MBTI<sup>®</sup> Global Step I<sup>™</sup> and European Step I<sup>™</sup> Preference Pair Results

Correlations between MBTI Global Step I and European Step I preference pair results for the Polish sample are shown in table 4. The overall agreement rate for whole types between the Global Step I and European Step I assessments was 49%. The agreement rate is reasonably similar to what was seen when Form M replaced Form G in the United States (Myers, McCaulley, Quenk, & Hammer, 1998). The European Step I assessment is more strongly related to Form G than to Form M, and thus the overall agreement rate is not unexpected.

### Global Step I<sup>®</sup> Preference Pair Intercorrelations

Intercorrelations of Global Step I preference pair continuous scores in the Polish sample are shown in table 5 below the diagonal. The highest correlation is between the S–N and T–F preference pairs. The next highest is between S–N and J–P. Also notable is the correlation between T–F and J–P. These correlations are similar to those found for the global sample, shown in table 5 above the diagonal. The Polish sample findings are reasonably consistent with those reported for the European Step I assessment in the *European Data Supplement: Polish* (OPP Ltd, 2016) and likewise consistent with those reported for Form M in the 1998 *MBTI*<sup>®</sup> *Manual* (Myers et al.).

### Reliability of Global Step I" Results

*Reliability* refers to consistency of measurement. A measure is said to be reliable when it produces a consistent, though not necessarily identical, result. Internal consistency reliability measures the consistency of responses across items in a particular measure for a particular sample. The most commonly used estimator of internal consistency reliability is Cronbach's alpha (Cronbach, 1951). The internal consistency reliabilities for the Polish sample and the global sample are reported in table 6. The reliabilities of the four preference pairs are good for the Polish sample and are very similar to those reported in the *MBTI*<sup>®</sup> *Manual for the Global Step I*<sup>®</sup> and *Step II*<sup>®</sup> *Assessments* (Myers et al., 2018).

### Validity of Global Step I" Results: Factor Analysis

An instrument is said to be valid when it measures what it has been designed to measure (Ghiselli, Campbell, & Zedeck, 1981; Murphy & Davidshofer, 2005). In several studies, confirmatory factor analyses of the MBTI assessment have been conducted 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 Polish sample. The results are presented in table 7. The shaded cells indicate that factor 1 is T–F. factor 2 is E–I. factor 3 is S–N. and factor 4 is J–P. The first factor is the one that accounts for the most variance in the sample. The four-factor structure produced by this analysis shows that the MBTI Global Step I items translated into Polish are measuring their intended constructs, the four preference pairs.

# Table 5 | Intercorrelations of Global Step I<sup>®</sup> preference pair continuous scores: Polish and global samples

Preference pair	E-I	S-N	T-F	J-P
E–I S–N T–F J–P	18 07 10	20  .44 .42	15 .27  .40	15 .48 .23

Note: Correlations for the Polish sample (N = 271) are below the diagonal; those for the global sample (N = 16,773) are above the diagonal.

### Table 6 | Internal consistency reliabilities of Global Step I<sup>®</sup> preference pair continuous scores: Polish and global samples

		С	onbac	h's alp	ha
Sample	N	E-I	S-N	T-F	J-P
Polish Global	271 16,773		.85 .87		.88. .88

Table 7	Factor analysis rotated	component matrix for the Polish sample
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Item code	Factor 1 T-F	Factor 2 E-I	Factor 3 S-N	Factor 4 J-P	Item code	Factor 1 T-F	Factor 2 E-I	Factor 3 S-N	Factor 4 J-P
EI1	.01	.71	07	.00	TF1	.29	32	.33	01
EI2	.02	.39	.00	10	TF2	.50	12	.14	.03
EI3	.07	.22	.07	.20	TF3	.55	.15	.15	.18
EI4	25	.45	.07	.03	TF4	.57	.05	.10	.12
EI5	.05	.59	01	13	TF5	.51	.03	.11	.24
EI6	24	.40	.02	16	TF6	.50	.10	.05	.04
EI7	.09	.46	24	19	TF7	.56	09	.09	.11
E18	.23	.38	08	.14	TF8	.60	05	05	.06
EI9	.00	.52	.11	.04	TF9	.58	02	.15	.19
EI10	.07	.36	09	.05	TF10	.62	14	.10	.00
EI11	.03	.46	07	05	TF11	.46	.08	09	.07
EI12	.07	.31	15	08	TF12	.20	04	.52	.06
El13	14	.49	10	.18	TF13	.64	.03	.18	.09
El14	02	.55	.00	14	TF14	.41	.01	.05	.09
EI15	.00	.50	09	08	TF15	03	21	.19	07
EI16	01	.52	26	.03	TF16	.59	.05	.24	.22
EI17	15	.42	.01	.01	TF17	.59	.10	.18	.14
EI18	.11	.65	02	.02	TF18	.60	.06	.11	.08
EI19	08	.66	10	05	TF19	.57	05	.02	.00
EI20	24	.52	.20	.11	TF20	.50	12	.03	.01
EI21	.03	.62	06	.10	TF21	.66	.00	.10	.08
EI22	08	.64	07	11	TF22	.57	.04	.04	01
EI23	.13	.66	.05	02	TF23	.49	.01	.10	.14
EI24	.03	.56	16	07			0.0	0.4	64
CNI	07	11	74	02	JP1	.09 03	.09	.04	.61
SN1 SN2	.03 .22	.11 .23	.34 .15	.02 .05	JP2 JP3	03 02	.07 .01	.35 .10	.38 .54
SNZ SN3	.22	08	.15	.05	JP3 JP4	02	.01 –.13	.10 –.03	.54
SN4	09	13	.34	.20	JP5	.09	13 17	05 .16	.38
SN5	.25	09	.40	.03	JP6	.01	.09	.06	.52
SN6	.23	.15	.40	.24	JP7	.20	14	.20	.52
SN7	.07	.15	.37	.02	JP8	05	.00	.00	.47
SN8	07	.00	.32	.06	JP9	.10	.19	12	.49
SN9	.25	.07	.46	.15	JP10	.18	.03	01	.54
SN10	.15	.01	.28	.04	JP11	08	14	.18	.52
SN11	.05	11	.44	.18	JP12	.11	.01	.04	.48
SN12	.19	04	.56	.03	JP13	.16	04	.15	.65
SN13	02	.05	.45	07	JP14	.09	16	.32	.64
SN14	01	12	.66	.01	JP15	.31	05	.23	.40
SN15	.25	04	.60	.15	JP16	.26	10	02	.68
SN16	.32	09	.58	01	JP17	.16	.06	01	.55
SN17	04	20	.50	05	JP18	.05	13	.45	.36
SN18	02	21	.44	05	JP19	.18	12	.06	.48
SN19	.14	.19	.29	01	JP20	.16	.06	.07	.47
SN20	.20	18	.60	.03	JP21	.04	12	.43	.35
SN21	.05	16	.41	.33					
SN22	.08	12	.59	.13					
SN23	.13	07	.38	.14					
SN24	.09	06	.41	.35					

Note: N = 271.

### MBTI<sup>®</sup> GLOBAL STEP II<sup>®</sup> ASSESSMENT RESULTS FOR THE POLISH SAMPLE

The Global Step II assessment includes the 92 items that make up the Global Step I assessment (measuring the four preference pairs, E-I, S-N, T-F, and J-P) plus another 51 items that are used only to measure the Step II facets. For each of the four preference pairs 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 expressed differently and thus create a richer and more detailed description of an individual's personality. The remaining analyses in this brief focus on the evaluation of the Step II facets.

### Relationships Between MBTI° Global Step II" and European Step II" Facet Results

The Global Step II assessment replaces the Form Q assessment and the European Step II assessment. Table 8 presents the relationships between Global Step II and European Step II facet results for the Polish sample. Most correlations are quite high. Note that the two lowest correlations occur on the Questioning–Accommodating and Critical–Accepting facet scales (.69 and .78, respectively). The Questioning–Accommodating and Critical–Accepting facet scales on the Global Step II assessment had several changes from the facet scales of the same name on the prior assessment. The changes to these facet scales account for the two lowest correlations in table 8.

### **Global Step II**<sup>\*</sup> Facet Intercorrelations

Intercorrelations of Global Step II facets are presented in table 9. Facets within each preference pair correlate more highly with other facets of the same preference pair than with facets of different preference pairs.

### Reliability of Global Step II<sup>™</sup> Results

Internal consistency reliabilities for each facet are reported in table 10 for the Polish sample and the global sample. The Polish sample alphas range from .50 (Critical–Accepting) to .83 (Initiating–Receiving). Overall, this sample's alphas are very similar to those of the global sample.

### Validity of Global Step II<sup>™</sup> Results

Reported here as evidence of the validity of the Polish translation of the MBTI<sup>®</sup> Global Step II<sup>®</sup> assessment are the percentage of out-of-preference facet scores for each preference pair, as well as correlations between preference pairs and facets.

The five facets within each preference pair do not represent the entire conceptual domain of the preference pair. Further, it is not uncommon for individuals to have a

## Table 8 | Relationships between Global Step II" and European Step II" facet results: Polish sample

Global Step II° facet	Correlation between Global Step II" and European Step II" facet results
E–I facets	
Initiating-Receiving	.95
Expressive-Contained	.94
Gregarious-Intimate	.98
Active-Reflective	.89
Enthusiastic-Quiet	.97
S-N facets	
Concrete-Abstract	.95
Realistic-Imaginative	1.00
Practical-Conceptual	.87
Experiential-Theoretical	.97
Traditional-Original	.94
T–F facets	
Logical-Empathetic	.96
Reasonable–Compassionate	.95
Questioning-Accommodating	.69
Critical-Accepting	.78
Tough-Tender	.97
J–P facets	
Systematic–Casual	.97
Planful-Open-Ended	.98
Early Starting-Pressure-Prompted	.95
Scheduled-Spontaneous	.91
Methodical-Emergent	.90

Note: N = 271.

facet score on the side opposite that of their preference in a given preference pair. For example, an Extravert may score toward the Intimate pole of the Gregarious– Intimate facet. This apparent inconsistency is referred to as an out-of-preference score and defined as a facet score from -2 to -5 when a respondent has a preference for I, N, F, or P; or from 2 to 5 when a respondent has a preference for E, S, T, or J. While it is not unusual to have a number of out-of-preference scores, it is relatively rare to have three or more facet scores out-of-preference for any one preference pair. The percentage of out-ofpreference facet scores for each preference pair in the Polish sample is shown in table 11.

Correlations between facets and preference pairs are presented in table 12. The correlation between each facet and its corresponding preference pair is significantly higher than those between the facet and the other three preference pairs. This is "compelling evidence for the

Global Step II" facet		~	M	4	ы	e	~	ø	ର	10. 10.	11	12.	13.	14.	15.	16.	17.	18.	19.	50.
E_l facate																				
E-1 acces																				
1. Initiating-Receiving	I																			
2. Expressive-Contained	.53	Ι																		
3. Gregarious-Intimate	.60	.45	Ι																	
4. Active-Reflective	69.	.58	.52	I																
5. Enthusiastic-Quiet	.63	.53	.59	.62	Ι															
S-N facets																				
6. Concrete-Abstract	07	02	01	10	16	Ι														
7. Realistic-Imaginative	14	13	11	18	26	.70	Ι													
8. Practical-Conceptual	15	09	11	17	24	.66	.64	I												
9. Experiential-Theoretical	.19	.16	.13	.10	.17	.33	.22	.15	Ι											
10. Traditional-Original	24	11	20	25	33	.63	.53	.70	.06	I										
T-F facets																				
11. Logical-Empathetic	02	18	90.	15	18	.49	.52	.32	.25	.23	Ι									
12. Reasonable-Compassionate	.01	19	.06	-00	11	.39	.43	.27	.23	.17	.83	Ι								
13. Questioning-Accommodating	.18	08	.11	90.	.08	.06	.18	05	.17	23	.44	.48	Ι							
14. Critical-Accepting	07	21	01	12	19	.23	.35	.23	60.	.08	.51	.53	.72	Ι						
15. Tough-Tender	.10	14	.10	00.	07	.22	.33	.12	.11	02	.59	.61	.70	.66	Ι					
J-P facets																				
16. Systematic-Casual	-00	06	13	19	29	.61	.52	.43	.16	.53	.46	.37	.07	.24	.20	Ι				
17. Planful-Open-Ended	07	06	07	12	23	.32	.24	.27	60 <sup>.</sup>	.31	.32	.20	.08	.17	.16	.57	Ι			
18. Early Starting-Pressure-Prompted	04	.02	12	60 <sup>.</sup> –	15	.30	.21	.19	60.	.26	.22	.18	00.	.11	.05	.57	52	Ι		
19. Scheduled–Spontaneous	10	04	06	16	21	.43	.36	.27	.14	.36	.43	.33	.10	.22	.19	.79	.72	.55	Ι	
20. Methodical-Emergent	04	07	08	10	16	.19	.14	.04	.07	.14	.28	.20	.14	.15	.14	09.	56	.52	69	Ι
Note: $N = 271$ .																				

Table 9 | Intercorrelations of Global Step II" facets: Polish sample

### Table 10 | Internal consistency reliabilities ofGlobal Step II" facets: Polish and global samples

	Cronbach's alpha			
Global Step II <sup>®</sup> facet	Polish sample	Global sample		
E–I facets				
Initiating-Receiving	.83	.82		
Expressive-Contained	.73	.73		
Gregarious-Intimate	.57	.62		
Active-Reflective	.55	.64		
Enthusiastic-Quiet	.68	.69		
S-N facets				
Concrete-Abstract	.76	.74		
Realistic-Imaginative	.80	.72		
Practical-Conceptual	.65	.66		
Experiential-Theoretical	.58	.68		
Traditional-Original	.68	.72		
T-F facets				
Logical-Empathetic	.79	.80		
Reasonable-	.75	.76		
Compassionate				
Questioning– Accommodating	.64	.62		
Critical-Accepting	.50	.59		
Tough-Tender	.74	.73		
J–P facets				
Systematic–Casual	.77	.76		
Planful-Open-Ended	.74	.79		
Early Starting– Pressure-Prompted	.68	.65		
Scheduled– Spontaneous	.78	.80		
Methodical–Emergent	.63	.64		

Note: Polish sample, N = 271; global sample, N = 16,773.

#### Table 11 | Percentage of reported out-ofpreference Global Step II" facet scores: Polish sample

Preference	Number of out-of-preference facet scores (%)					
pair	0	1	2	3	4	5
E-I	70	23	8	0	0	0
S-N	59	35	6	0	0	0
T–F	77	15	6	1	0	0
J-P	74	20	6	0	0	0

Note: N = 271. Percentages may not total 100% due to rounding of decimals.

### Table 12 | Correlations between Global Step II\*facets and preference pairs: Polish sample

			1 A.		
	Preference pair				
Global Step II <sup>®</sup> facet	E-I	S-N	T-F	J-P	
E-I facets					
Initiating-Receiving	.85	13	.02	06	
Expressive-Contained	.75	08	19	05	
Gregarious-Intimate	.71	09	.07	08	
Active-Reflective	.81	17	09	14	
Enthusiastic-Quiet	.80	25	15	23	
S-N facets					
Concrete-Abstract	10	.89	.42	.44	
Realistic-Imaginative	20	.85	.48	.35	
Practical-Conceptual	19	.80	.27	.28	
Experiential–Theoretical	.20	.37	.22	.14	
Traditional–Original	29	.74	.15	.36	
T-F facets					
Logical–Empathetic	11	.51	.91	.44	
Reasonable– Compassionate	07	.42	.90	.33	
Questioning-	.12	.08	.61	.13	
Accommodating					
Critical–Accepting	15	.28	.64	.25	
Tough-Tender	.00	.23	.78	.23	
J–P facets					
Systematic-Casual	16	.59	.40	.84	
Planful-Open-Ended	10	.34	.26	.82	
Early Starting– Pressure-Prompted	04	.25	.19	.65	
Scheduled–Spontaneous	12	.42	.37	.95	
Methodical-Emergent	07	.15	.25	.72	
2					

Note: N = 271.

theoretical hierarchical structure of the Step II facets in relation to the Step I scales" (Quenk, Hammer, & Majors, 2001, p. 104). The sample correlations are comparable to those reported in the *MBTI® Step II® Manual* (Quenk et al., 2001), in the *MBTI® Step II® Manual, European Edition* (Quenk, Hammer, & Majors, 2004), and for the Polish sample in the *European Data Supplement* (OPP Ltd, 2018). For the Global Step II assessment in Polish, the lowest correlation between a facet and its corresponding preference pair is between Experiential–Theoretical and S–N. For the Polish sample, more than half of the correlations between a facet and its corresponding preference pair are .80 or higher.

### CONCLUSION

Initial analyses of the Polish translations of the MBTI Global Step I and Step II assessments demonstrate that they each have good internal consistency reliabilities that are consistent with those of prior forms of the MBTI assessment (i.e., Form M and Form Q, European Step I and Step II). Validity was established by showing the percentage of out-of-preference facet scores and correlations between Global Step I preferences and Global Step II facets. While more research should be conducted, all these analyses show that the Polish translations of the MBTI Global Step I and Step II assessments have adequate reliability and validity and are appropriate for use with individuals in Poland who read and understand Polish.

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