MBTI® MANUAL GLOBAL SUPPLEMENT SERIES



Denmark (Danish)Supplement to the **MBTI**® **Manual** for the **Global Step I**™ and **Step II**™ **Assessments**

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INTRODUCTION

As steward of the Myers-Briggs Type Indicator (MBTI°) assessment, The Myers-Briggs Company had two overarching goals in undertaking its revision to create global Step I™ and Step II™ forms: (1) preserve the integrity of the Step I and Step II assessments and (2) improve the reliability and validity of the MBTI assessment overall. More specifically, the company sought to update existing representative samples and compile new representative samples in additional countries based on translations (or adaptations) of the assessment into additional languages, use a statistical model consistent with type theory, and, if supported by data analysis, use the same scoring method globally, so that scores could be compared across all those countries and languages.

Broadening existing and compiling new representative samples was a high priority. The prior revision of the MBTI assessment culminated in the 1998 publication of MBTI Form M (Step I), which replaced the earlier Form G. Form Q (Step II) was subsequently published in 2001 and replaced Form K. In the United Kingdom, the European Step I assessment was published in 1997. The European Step II assessment was published in 2003 based on pan-European samples compiled by OPP Ltd. Although all these forms of the MBTI assessment served their audiences well, no additional representative samples in the United States or the UK had been compiled subsequent to their publication. It was therefore important to update the US and UK representative samples as well as expand the number of representative samples to include additional countries and languages, reflecting the increasingly global reach of the MBTI assessment.

To address this need, data were collected in targeted countries (see table 1), with specific demographic targets set by experts for all samples except those from Brazil and South Africa. A consistent data collection effort yielded samples that responded to a common 230-item

MBTI research form containing all items on then-current forms of the assessment (i.e., MBTI Form M and Form Q, and European Step I and Step II); common demographic items; and other validation assessments. Respondents who completed North American English or European English versions of the assessment also completed an online interpretation session through The Myers-Briggs Company's MBTI®Complete website, making their verified, or "best-fit," type available for analysis.

In brief, the revision of the MBTI assessment provided the opportunity to collect a wealth of data, resulting in national representative samples that had not existed previously. These samples served the global research effort for the revised assessments themselves and also provided 4 new large and 19 new moderate-size samples. (Please note: In this manual supplement series, a particular sample may be referred to by either country or language for convenience in a particular context. Refer as needed to the sample names listed in table 1 when considering the results presented.)

Two different categories of samples were collected for this global project. Table 1 lists the 4 "large" samples— United States, Canada, and Australia (all North American English), and the United Kingdom (European English) and the 19 "moderate-size" samples from around the world, which were all combined to form the global sample. Large samples were targeted to have 1,000 or more respondents, to exceed the sample size of an existing representative sample (specifically, in the US and the UK), and to reflect the size of the market for the MBTI assessment. The moderate-size samples for the most part included targets to ensure that they were nationally representative; only 3 of these samples—Brazil (Brazilian Portuguese), South Africa (Afrikaans), and South Africa (North American English)—due in part to their smaller markets for the MBTI assessment, were distributor led and nonrepresentative.

The MBTI global sample consists of 16,773 individuals, as detailed and summarized in chapter 7 of the MBTI® Manual for the Global Step I[™] and Step II[™] Assessments (Myers, McCaulley, Quenk, & Hammer, 2018). The global sample was used to develop the Global Step I and Step Il assessments. It is critical to keep in mind that while analyses were conducted for each country/language sample used in this supplement series, the focus of the analyses was on the global sample reported in the 2018 MBTI manual.

This supplement to the 2018 manual summarizes results obtained from responses of the Denmark (Danish) sample—hereafter, Danish sample—to the Global Step I and Step II assessments translated into the Danish language. Included in this supplement are a description of the sample and data collection efforts, type distribution tables specific to the sample, analyses of

Table 1 | List of large and moderate-size country/ language samples in the MBTI® global sample

Country/language sample	N
Large samples	
Australia (North American English)	776
Canada (North American English)	939
United Kingdom (European English)	2,831
United States (North American English)	3,578
Moderate-size samples	
Brazil (Brazilian Portuguese)*	839
Canada (Canadian French)	176
China (Simplified Chinese)	521
China (Traditional Chinese)	477
Denmark (Danish)	468
Finland (Finnish)	524
France (European French)	472
Germany (German)†	440
Greece (Greek)	277
Ireland (European English)	383
Italy (Italian)	458
Mexico (Latin American Spanish)	359
Netherlands (Dutch)	506
Norway (Norwegian)	493
Portugal (European Portuguese)	503
South Africa (Afrikaans)*	505
South Africa (North American English)*	189
Spain (European Spanish)	564
Sweden (Swedish)	495

Note: Global sample, N = 16,773.

Step I and Step II scales, and the results of reliability and validity studies conducted on the Danish sample.

TRANSLATION PROCESS

The Myers-Briggs Company's translation process for the MBTI Global Step I and Step II assessments was based on industry-standard methods for assessment translation (International Test Commission, 2005). Because each of the languages included in this project has a different history of translation and use, the process varied somewhat for different languages.

As part of the research process to develop the MBTI® European Step II[™] assessment, a research form containing 230 items from the Myers' pool of existing items (and known as the Pan-European Step II[™]—Trial Form) was created (see Quenk, Hammer, & Majors, 2004, for details). This form was translated into nine European languages—Danish, Dutch, English, French, German, Italian, Norwegian, Spanish, and Swedish—and used

^{*}Data collection for this sample was distributor led; it is not a representative sample.

[†]Germany sample includes one individual residing in Switzerland.

to collect MBTI assessment data. It later was refined to become the 166-item European Step II assessment, with a version for each language; all versions have been used extensively since their release. Additional research on these different language versions of the assessment, and on others developed since that time, has been reported by OPP Ltd (2009). The 230-item research form became the starting point for the translation of the Danishlanguage version used in this global project.

OPP's original Danish translation was created by a professional linguist; it was evaluated by in-country expert reviewers and iterated until a satisfactory version of the translation was developed. For this global project, the Danish version was again evaluated by a professional linguist as well as in-country expert reviewers; modifications were made to item wordings to further improve the quality and accuracy of the translation. All changes were reviewed by the linguist as well as in-country expert reviewers, iteratively, until an agreedupon translation was developed.

DATA COLLECTION

Data for this revision of the assessment were collected almost exclusively online through two Myers-Briggs Company websites. The first site, built by the company's Research Division, accommodated the administration of the MBTI research form and other validity assessments, which were used for non-Englishspeaking research participants. The second site, for English-speaking participants, was a special modification of MBTI°Complete created for this research project using the 230-item MBTI research form, followed by MBTI Complete's online interpretation session yielding respondents' best-fit type results. (For details on bestfit type, see chapter 7 in the 2018 MBTI manual.) As MBTI°Complete was not used in collecting the Danish sample, best-fit type data for the sample are unavailable.

For the MBTI research form, specific sampling targets were set for each sample. The targets for the Danish sample are provided in table 2. Local MBTI distributors helped determine the final targets for samples in their respective countries or regions by selecting appropriate official sources. In general, sampling targets were designed to mirror the working-age population.

Once the websites were prepared and the sampling targets were set, data collection began. For most samples, the majority of participants were provided with incentives by an external market research firm. Such firms maintain panels of participants who have expressed willingness to participate in research. These participants were compensated for completing some combination of demographic items, the MBTI research form, and/

Table 2 | Demographic summary: Danish sample

Demographic	Target %	Actual %
Age group		
15-24 years	14	13
25–44 years	34	35
45-64 years	33	37
65+ years	19	15
Mean age: 46 years	_	_
Gender		
Female	50	53
Male	50	47
Employment status		
Working full-time	48	52
Working part-time	16	15
Student	8	8
Looking after family/home	11	4
Long-term sick	10	3
Retired / not working for income / none of the above	8	19
No response	_	<1
Self-employed		
Yes	4	5
No	96	55
No response	_	40
Country of residence		
Denmark	_	100

Note: N = 468. Percentages in a given category may not total 100% due to the rounding of decimals.

or other validity assessments. For some samples—for example, Brazil (Brazilian Portuguese)—the locally based MBTI distributor led the data collection effort. Once data were collected, all cases were thoroughly examined, and invalid cases (e.g., those with too many response omissions or where a participant had selected only the "A" response option across 230 items) were removed. This cleanup step, while reducing final sample sizes, was required to ensure that only the highest-quality data remained for analysis.

A representative sample of individuals in Denmark who read Danish was obtained from a market research firm. Targets provided by OPP Ltd were set based on the population of Denmark. Table 2 shows the demographic target and actual percentages obtained. The resulting Danish sample consists of 468 individuals, 53% women and 47% men. The age range is 16-81, with an average of 46 years (standard deviation = 15.5). All individuals reported residing in Denmark.

Table 3 | Reported MBTI° type distribution: Danish sample

Ser	ising	Intui	tion		
Thinking	Fee	ling	Thinking		
ISTJ <i>n</i> = 73 15.6%	ISFJ <i>n</i> = 31 6.6%	INFJ n = 0 0.0%	INTJ n = 8 1.7%	Judging	Introv
ISTP <i>n</i> = 47 10.0%	ISFP n = 33 7.1%	INFP n = 34 7.3%	INTP n = 21 4.5%	Perceiving	Introversion
ESTP <i>n</i> = 30 6.4%	ESFP n = 35 7.5%	ENFP n = 52 11.1%	ENTP n = 33 7.1%	iving	Extrav
ESTJ <i>n</i> = 33 7.1%	ESFJ n = 26 5.6%	ENFJ n = 9 1.9%	ENTJ <i>n</i> = 3 0.6%	Judging	Extraversion

Note: N = 468. Percentages may not total 100% due to the rounding of decimals.

Table 4 | Reported MBTI° type preference and preference combination distributions: Danish sample

P	Preferences		Preferences Orientation pairs			Pı	Process pairs			Orientation of energy and perceiving pairs			Judging and external orientation pairs			
	n	%		n	%		n	%		n	%		n	%		
E	221	47.2	EJ	71	15.2	ST	183	39.1	ES	124	26.5	TJ	117	25.0		
ı	247	52.8	EP	150	32.1	SF	125	26.7	EN	97	20.7	TP	131	28.0		
S	308	65.8	IJ	112	23.9	NF	95	20.3	IS	184	39.3	FJ	66	14.1		
N	160	34.2	IP	135	28.8	NT	65	13.9	IN	63	13.5	FP	154	32.9		
Т	248	53.0														
F	220	47.0														
J	183	39.1														
Р	285	60.9														

Note: N = 468.

MBTI° GLOBAL STEP I" ASSESSMENT RESULTS FOR THE DANISH SAMPLE

The Global Step I assessment contains 92 items used to help determine individuals' personality type by identifying their preferences on four pairs of opposites (Extraversion-Introversion, Sensing-Intuition, Thinking-Feeling, and Judging-Perceiving). Combining an individual's four preferences yields 1 of 16 possible MBTI types. The Global Step I assessment replaces the Form M assessment and the European Step I assessment.

MBTI° Type and Preference Distributions

MBTI type was computed for all participants in the Danish sample. Type, preference, and preference combination distributions for this sample are presented in tables 3 and 4.

Table 3 shows that the most common types for this representative sample are ISTJ and ENFP. The least common types are INFJ and ENTJ. As reported in the MBTI® Step I™ Instrument European Data Supplement (OPP Ltd, 2011), the most common types in a general Danish population sample (N = 13,561) at that time were ESTJ and ENTP. The least common types in that sample

Table 5 | Reported MBTI° type distribution for men: Danish sample

Ser	ising	Intui	tion		
Thinking	Fee	Thinking			
ISTJ <i>n</i> = 41 18.5%	ISFJ n = 5 2.3%	INFJ n = 0 0.0%	INTJ n = 4 1.8%	Judging	Introv
ISTP <i>n</i> = 35 15.8%	ISFP n = 10 4.5%	INFP n = 16 7.2%	INTP n = 14 6.3%	Perceiving	Introversion
ESTP <i>n</i> = 18 8.1%	ESFP <i>n</i> = 12 5.4%	ENFP n = 18 8.1%	ENTP <i>n</i> = 19 8.6%	iving	Extrav
ESTJ <i>n</i> = 12 5.4%	ESFJ n = 12 5.4%	ENFJ n = 4 1.8%	ENTJ <i>n</i> = 2 0.9%	Judging	Extraversion

Note: n = 222. Percentages may not total 100% due to the rounding of decimals.

Table 6 | Reported MBTI° type preference and preference combination distributions for men: Danish sample

Preferences		Preferences Orientation pairs		Pr	Process pairs			Orientation of energy and perceiving pairs			Judging and external orientation pairs			
	n	%		n	%		n	%		n	%		n	%
E	97	43.7	EJ	30	13.5	ST	106	47.7	ES	54	24.3	ТJ	59	26.6
1	125	56.3	EP	67	30.2	SF	39	17.6	EN	43	19.4	TP	86	38.7
S	145	65.3	IJ	50	22.5	NF	38	17.1	IS	91	41.0	FJ	21	9.5
N	77	34.7	IP	75	33.8	NT	39	17.6	IN	34	15.3	FP	56	25.2
Т	145	65.3												
F	77	34.7												
J	80	36.0												
Р	142	64.0												

Note: n = 222.

were INFJ and ISFP. Table 4 shows the distributions of preferences as well as four two-preference combinations: (1) orientation pairs, (2) process pairs, (3) orientation of energy and perceiving process pairs, and (4) judging process and external orientation pairs. The table shows that of the attitude pairs, EPs and IPs occur more frequently. In addition, Ss are more prevalent than Ns and Ps more than Js, while Es and Is and Ts and Fs are more evenly distributed.

Tables 5–8 show type and preference distributions by gender. As seen in table 5 for men, ISTJ and ISTP are the most common types. As seen in table 7 for women, ENFP and ISTJ are the most common types. For both men and women, the least common type is INFJ; there are no INFJs in the Danish sample. ENTJ is the second least common type for both men and women in this sample.

Table 7 | Reported MBTI® type distribution for women: Danish sample

Sen	sing	Intui	tion		
Thinking	Fee	ling	Thinking		
ISTJ <i>n</i> = 32 13.0%	ISFJ n = 26 10.6%	INFJ n = 0 0.0%	INTJ n = 4 1.6%	Judging	Introv
ISTP <i>n</i> = 12 4.9%	ISFP n = 23 9.3%	INFP n = 18 7.3%	INTP n = 7 2.8%	Perceiving	Introversion
ESTP <i>n</i> = 12 4.9%	ESFP <i>n</i> = 23 9.3%	ENFP <i>n</i> = 34 13.8%	ENTP <i>n</i> = 14 5.7%	iving	Extrav
ESTJ <i>n</i> = 21 8.5%	ESFJ <i>n</i> = 14 5.7%	ENFJ <i>n</i> = 5 2.0%	ENTJ <i>n</i> = 1 0.4%	Judging	Extraversion

Note: n = 246. Percentages may not total 100% due to the rounding of decimals.

Table 8 | Reported MBTI° type preference and preference combination distributions for women: Danish sample

Preferences		Preferences Orientation pairs		Pro	Process pairs			Orientation of energy and perceiving pairs			Judging and external orientation pairs			
	n	%		n	%		n	%		n	%		n	%
E	124	50.4	EJ	41	16.7	ST	77	31.3	ES	70	28.5	TJ	58	23.6
1	122	49.6	EP	83	33.7	SF	86	35.0	EN	54	22.0	TP	45	18.3
S	163	66.3	IJ	62	25.2	NF	57	23.2	IS	93	37.8	FJ	45	18.3
N	83	33.7	IP	60	24.4	NT	26	10.6	IN	29	11.8	FP	98	39.8
Т	103	41.9												
F	143	58.1												
J	103	41.9												
Р	143	58.1												

Note: n = 246. Percentages in a given category may not total 100% due to the rounding of decimals.

Relationships Between MBTI® Global Step I™, Form M, and European Step I[™] Preference Pair **Results**

Correlations between MBTI Global Step I, Form M, and European Step I preference pair results for the Danish sample are shown in table 9.2 The overall agreement rate of whole types between the Global Step I and Form M assessments is 82%, while between the Global Step I and European Step I assessments it is 53%. The agreement rate between the Global Step I and Form M assessments is higher than the 60% agreement rate between Form G and Form M reported in the 1998 MBTI® Manual (Myers, McCaulley, Quenk, & Hammer).

Global Step I[™] Preference Pair **Intercorrelations**

Intercorrelations of Global Step I continuous scores in the Danish sample are shown in table 10 below the diagonal. The highest correlation is between the S-N and J-P preference pairs. The next highest is between S-N and T-F. These correlations are very similar to those found for the global sample, shown in table 10 above the diagonal. The Danish sample findings are likewise consistent with those reported for Form M in the 1998 MBTI® Manual (Myers et al.).

Table 9 | Relationships between MBTI° Global Step I", Form M, and European Step I" preference pair results: Danish sample

	Global Step I [™] a	nd Form M	Global Step I" and European Step I"			
Preference pair	Correlation between continuous scores	Agreement rate (%)	Correlation between continuous scores	Agreement rate (%)		
E-I	.97	95	.94	88		
S-N	.96	94	.92	87		
T-F	.98	96	.89	84		
J-P	.97	94	.89	81		
Overall agreement ra	ate for whole types	82		53		

Note: N = 468.

Table 10 | Intercorrelations of Global Step I[™] preference pair continuous scores: Danish and global samples

Preference pair	E-I	S-N	T-F	J-P
E-I	_	20	15	15
S-N	34	_	.27	.48
T-F	29	.35	_	.23
J-P	25	.57	.27	_

Note: Correlations for the Danish sample (N = 468) are below the diagonal; those for the global sample (N = 16,773) are above the diagonal.

Reliability and Validity of Global Step I™ Results

This section covers measurement properties for the Danish translation of the MBTI Global Step I assessment, including reliability and validity. For full Step I reliability and validity information for the global sample, refer to chapters 8 and 9 of the MBTI® Manual for the Global Step I[™] and Step II[™] Assessments (Myers et al., 2018).

RELIABILITY

Reliability refers to consistency of measurement. A measure is said to be reliable when it produces a consistent, though not necessarily identical, result. Scores, not assessments, are either reliable or unreliable for a particular population of respondents, as reliability is affected by both the sample and the items contained in the instrument (Capraro & Capraro, 2002). Because reliability hinges at least partially on total score variability, samples that are homogeneous on the characteristic being measured will likely yield a low total score variance, and the reliability of the scores regarding the characteristic may be poor. Conversely, participants in a sample that is heterogeneous with respect to the characteristic will likely score differently from each other,

Table 11 | Internal consistency and test-retest reliabilities of Global Step I™ preference pair continuous scores: Danish and global samples

		Cronbach's alpha					
Sample	N	E-I	S-N	T-F	J-P		
Danish Global	468 16,773	.91 .89	.89 .87	.90 .89	.88 .88		
		Test-retest correlation					
Sample (interval)	n	E-I	S-N	T-F	J-P		
Danish (≤15 weeks) Global (≤15 weeks)	81 1,721	.89 .86	.86 .83	.88 .82	.83 .81		
		Test-retest agreement rate (%)					
Sample (interval)	n	E-I	S-N	T-F	J-P		
Danish (≤15 weeks) Global (≤15 weeks)	81 1,721	90 84	83 86	85 79	88 79		

thereby increasing variability and providing stronger reliability (Dawis, 1987).

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). Table 11 shows the Cronbach's alphas for Global Step I preference pairs in the Danish sample and for the global sample for comparison purposes. The Danish sample alphas range from .88 to .91.

Another form of reliability is test-retest, which estimates how stable a measure is over time. Test-retest reliability correlations of Global Step I continuous scores in the Danish sample are also presented in table 11. The test-retest interval was <15 weeks. This table also shows the rate of test-retest agreement for each preference pair. Additionally, test-retest correlations and test-retest agreement rates for the global sample are shown in this table for comparison purposes.

Table 12 shows the percentage of individuals in the Danish sample who reported zero, one, two, three, or four preferences the same upon retest. Ninety-two percent of individuals reported having either three or four preferences the same at time of retest.

VALIDITY

An instrument is said to be valid when it measures what it has been designed to measure (Ghiselli, Campbell, & Zedeck, 1981; Murphy & Davidshofer, 2005). Validity can be demonstrated using a number of different approaches. Convergent validity and discriminant validity are often examined by looking at the patterns of relationships on different instruments. An initial examination of convergent and discriminant validity was conducted by analyzing relationships found between the Danish translation of the MBTI Global Step I assessment and the Adjective Check List (ACL; Gough & Heilbrun, 1983) as well as the CPI 260° assessment (Gough ϑ Bradley, 2005).

ACL assessment. A portion of the Danish sample participants (n = 96) also completed a translated version of the ACL when completing the research version of the MBTI assessment. The ACL consists of 300 different adjectives-such as intelligent, alert, clear-thinking, and *noisy*—encompassing a wide variety of behaviors.

Table 12 | Percentage of individuals with preferences the same at retest: Danish sample

		Number of preferences the same at retest (%)						
Sample (interval)	n	4	3	2	1	0		
Danish (≤15 weeks)	81	57	35	6	2	0		

Respondents were asked to select the adjectives they believed were self-descriptive (Gough & Heilbrun, 1983). According to Gough and Heilbrun, results for any respondent with fewer than 20 adjectives or more than 250 adjectives checked should be cautiously interpreted; those with fewer than 10 or more than 270 checked are almost always invalid. As a result, respondents with too many or too few adjectives were omitted prior to analysis. The more conservative approach was taken here, and respondents with fewer than 20 adjectives or more than 250 adjectives checked were removed from the analysis of the ACL. Scales on the ACL assessment result from combinations of adjectives. Selected ACL scale means, standard deviations, and Cohen's d (Cohen, 1992; mean differences expressed in units of standard deviation³) for MBTI preferences for the Danish sample are presented in tables 13–16.

CPI 260° assessment. The CPI 260 assessment measures personality characteristics and is intended to provide a clear and accurate description of the respondent (Gough & Bradley, 2005). A portion of the Danish sample (n = 130) also completed the CPI 260 assessment. CPI 260 scale means, standard deviations, and Cohen's d for each of the four preference pairs are shown in tables 17-20.

Table 13 | ACL scale means, standard deviations, and Cohen's *d* for Global Step I[™] E−I preferences: Danish sample

			ersion	Introve	ersion			
ACL scale	ACL scale description	М	SD	М	SD	Cohen's a		
Sum of number checked	Total number of adjectives checked	81.08	50.30	52.98	34.23	-0.64		
Sum of favorable checked	Total number of favorable adjectives checked	39.85	18.68	22.66	14.76	-1.01		
Sum of unfavorable checked	Total number of unfavorable adjectives checked	6.10	11.14	5.68	6.33	-0.05		
Communality	An indicator of providing common or similar responses compared to the responses of people in general	7.54	3.72	4.91	4.07	-0.68		
Achievement	To strive to be outstanding in pursuits of socially recognized significance	9.90	5.94	5.27	4.69	-0.86		
Dominance	To seek and maintain a role as leader in groups, or to be influential and controlling in individual relationships	5.23	4.03	0.64	3.67	-1.19		
Endurance	To persist in any task undertaken	8.83	5.33	5.77	5.14	-0.58		
Order	To place special emphasis on neatness, organization, and planning in one's activities	6.67	4.41	4.59	4.30	-0.48		
Intraception	To engage in attempts to understand one's behavior or the behavior of others	9.75	5.84	5.89	4.78	-0.72		
Nurturance	To engage in behaviors that provide material or emotional benefits to others	11.06	6.17	4.98	6.22	-0.98		
Affiliation	To seek and maintain numerous personal friendships	17.56	8.38	9.55	6.95	-1.03		
Exhibition	To behave in such a way as to elicit the immediate attention of others	3.33	3.39	-0.50	3.18	-1.16		
Autonomy	To act independently of others or of social values and expectations	2.54	4.04	1.25	3.15	-0.35		
Aggression	To engage in behaviors that attack or hurt others	0.52	2.93	-1.41	3.81	-0.57		
Change	To seek novelty of experience and to avoid routine	3.56	3.31	1.11	2.54	-0.82		
Succorance	To solicit sympathy, affection, or emotional support from others	-0.52	2.59	0.48	3.21	0.35		
Deference	To seek and maintain subordinate roles in relationships with others	0.44	3.48	1.07	3.13	0.19		
Self-Control	To control one's behaviors and emotions	-0.08	2.92	1.11	3.03	0.40		
Self-Confidence	Poise, self-assurance, and belief in one's ability to achieve one's goals	8.15	4.87	2.23	3.67	-1.36		
Personal Adjustment	The ability to cope with situational and interpersonal demands, and a feeling of efficacy	6.88	3.79	3.50	4.27	-0.84		
Ideal Self	Strong sense of personal worth; or harmony between what one is and what one wants to be	6.37	4.95	2.45	4.44	-0.83		
Creative Personality	The desire to do and think differently from the norm, and a talent for originality	4.02	4.31	1.25	3.42	-0.71		
Military Leadership	Steadiness, self-discipline, and good judgment of the kind required in positions of military (or related) leadership	8.87	5.13	5.39	4.45	-0.72		
Adult	Attitudes of independence, objectivity, and industriousness associated with the concept of "mature adult"	7.96	5.32	4.68	4.86	-0.64		

Note: Extraversion, n = 52; Introversion, n = 44. For information on Cohen's d, see note 3 at the back of this supplement.

Table 14 | ACL scale means, standard deviations, and Cohen's *d* for Global Step I[™] S−N preferences: Danish sample

		Sens	ing	Intui	tion	
ACL scale	ACL scale description	М	SD	М	SD	Cohen's d
Sum of number checked	Total number of adjectives checked	54.47	37.91	86.61	49.08	0.75
Sum of favorable checked	Total number of favorable adjectives checked	26.00	16.18	39.98	19.67	0.79
Sum of unfavorable checked	Total number of unfavorable adjectives checked	4.58	6.18	7.68	12.00	0.34
Communality	An indicator of providing common or similar responses compared to the responses of people in general	5.65	3.63	7.24	4.50	0.40
Achievement	To strive to be outstanding in pursuits of socially recognized significance	6.71	5.79	9.22	5.69	0.44
Dominance	To seek and maintain a role as leader in groups, or to be influential and controlling in individual relationships	2.51	4.01	3.95	4.98	0.32
Endurance	To persist in any task undertaken	6.76	4.69	8.32	6.25	0.29
Order	To place special emphasis on neatness, organization, and planning in one's activities	4.96	3.74	6.73	5.16	0.40
Intraception	To engage in attempts to understand one's behavior or the behavior of others	6.05	4.60	10.56	6.04	0.86
Nurturance	To engage in behaviors that provide material or emotional benefits to others	6.78	5.90	10.27	7.61	0.52
Affiliation	To seek and maintain numerous personal friendships	11.49	7.85	17.10	8.83	0.68
Exhibition	To behave in such a way as to elicit the immediate attention of others	0.53	3.44	2.98	3.84	0.68
Autonomy	To act independently of others or of social values and expectations	0.89	3.30	3.37	3.76	0.71
Aggression	To engage in behaviors that attack or hurt others	-0.64	3.71	0.00	3.14	0.18
Change	To seek novelty of experience and to avoid routine	1.56	3.06	3.61	3.06	0.67
Succorance	To solicit sympathy, affection, or emotional support from others	0.05	2.65	-0.22	3.27	-0.09
Deference	To seek and maintain subordinate roles in relationships with others	1.40	2.83	-0.17	3.74	-0.48
Self-Control	To control one's behaviors and emotions	1.09	3.05	-0.37	2.78	-0.50
Self-Confidence	Poise, self-assurance, and belief in one's ability to achieve one's goals	3.93	5.06	7.46	4.87	0.71
Personal Adjustment	The ability to cope with situational and interpersonal demands, and a feeling of efficacy	4.42	3.97	6.56	4.56	0.51
Ideal Self	Strong sense of personal worth; or harmony between what one is and what one wants to be	3.11	4.47	6.54	5.27	0.71
Creative Personality	The desire to do and think differently from the norm, and a talent for originality	1.11	3.56	4.95	3.89	1.04
Military Leadership	Steadiness, self-discipline, and good judgment of the kind required in positions of military (or related) leadership	6.18	4.29	8.73	5.78	0.51
Adult	Attitudes of independence, objectivity, and industriousness associated with the concept of "mature adult"	5.53	4.38	7.71	6.26	0.41

Note: Sensing, n = 55; Intuition, n = 41.

Table 15 | ACL scale means, standard deviations, and Cohen's *d* for Global Step I[™] T−F preferences: Danish sample

		Think	king	Feel	ing	
ACL scale	ACL scale description	М	SD	М	SD	Cohen's d
Sum of number checked	Total number of adjectives checked	64.66	37.07	71.59	52.81	0.15
Sum of favorable checked	Total number of favorable adjectives checked	31.70	17.87	32.22	20.16	0.03
Sum of unfavorable checked	Total number of unfavorable adjectives checked	4.89	5.01	6.88	11.91	0.22
Communality	An indicator of providing common or similar responses compared to the responses of people in general	6.94	3.64	5.76	4.42	-0.29
Achievement	To strive to be outstanding in pursuits of socially recognized significance	8.72	5.95	6.88	5.67	-0.32
Dominance	To seek and maintain a role as leader in groups, or to be influential and controlling in individual relationships	3.94	4.61	2.35	4.26	-0.36
Endurance	To persist in any task undertaken	8.00	5.64	6.88	5.23	-0.21
Order	To place special emphasis on neatness, organization, and planning in one's activities	6.77	4.52	4.71	4.22	-0.47
Intraception	To engage in attempts to understand one's behavior or the behavior of others	8.06	5.36	7.90	6.05	-0.03
Nurturance	To engage in behaviors that provide material or emotional benefits to others	7.19	6.66	9.31	6.97	0.31
Affiliation	To seek and maintain numerous personal friendships	13.21	8.16	14.53	9.22	0.15
Exhibition	To behave in such a way as to elicit the immediate attention of others	1.74	4.28	1.41	3.30	-0.09
Autonomy	To act independently of others or of social values and expectations	2.11	4.02	1.80	3.39	-0.08
Aggression	To engage in behaviors that attack or hurt others	-0.38	3.85	-0.35	3.12	0.01
Change	To seek novelty of experience and to avoid routine	2.30	3.28	2.57	3.18	0.08
Succorance	To solicit sympathy, affection, or emotional support from others	-1.13	2.09	0.96	3.23	0.76
Deference	To seek and maintain subordinate roles in relationships with others	0.28	3.56	1.16	3.05	0.27
Self-Control	To control one's behaviors and emotions	0.70	2.82	0.24	3.20	-0.15
Self-Confidence	Poise, self-assurance, and belief in one's ability to achieve one's goals	6.17	5.10	4.73	5.36	-0.28
Personal Adjustment	The ability to cope with situational and interpersonal demands, and a feeling of efficacy	5.70	4.55	4.98	4.14	-0.17
Ideal Self	Strong sense of personal worth; or harmony between what one is and what one wants to be	5.49	4.92	3.69	5.15	-0.36
Creative Personality	The desire to do and think differently from the norm, and a talent for originality	3.17	3.85	2.35	4.42	-0.20
Military Leadership	Steadiness, self-discipline, and good judgment of the kind required in positions of military (or related) leadership	7.62	5.09	6.94	5.17	-0.13
Adult	Attitudes of independence, objectivity, and industriousness associated with the concept of "mature adult"	8.00	4.76	4.98	5.50	-0.59

Note: Thinking, n = 47; Feeling, n = 49.

Table 16 | ACL scale means, standard deviations, and Cohen's *d* for Global Step I[™] J−P preferences: Danish sample

			ging	Perce		
ACL scale	ACL scale description	М	SD	М	SD	Cohen's
Sum of number checked	Total number of adjectives checked	47.04	20.82	75.25	49.49	0.64
Sum of favorable checked	Total number of favorable adjectives checked	24.88	12.69	34.33	20.17	0.51
Sum of unfavorable checked	Total number of unfavorable adjectives checked	3.33	4.01	6.76	10.26	0.38
Communality	An indicator of providing common or similar responses compared to the responses of people in general	6.00	2.75	6.44	4.45	0.11
Achievement	To strive to be outstanding in pursuits of socially recognized significance	6.29	4.96	8.28	6.07	0.34
Dominance	To seek and maintain a role as leader in groups, or to be influential and controlling in individual relationships	1.58	3.15	3.64	4.76	0.47
Endurance	To persist in any task undertaken	7.33	4.54	7.46	5.73	0.02
Order	To place special emphasis on neatness, organization, and planning in one's activities	6.29	4.06	5.53	4.60	-0.17
Intraception	To engage in attempts to understand one's behavior or the behavior of others	6.00	3.98	8.64	6.04	0.47
Nurturance	To engage in behaviors that provide material or emotional benefits to others	7.00	6.14	8.69	7.08	0.25
Affiliation	To seek and maintain numerous personal friendships	10.25	5.51	15.10	9.24	0.57
Exhibition	To behave in such a way as to elicit the immediate attention of others	-0.17	2.44	2.15	4.00	0.63
Autonomy	To act independently of others or of social values and expectations	-0.08	3.06	2.62	3.66	0.77
Aggression	To engage in behaviors that attack or hurt others	-2.00	2.90	0.18	3.50	0.65
Change	To seek novelty of experience and to avoid routine	0.25	2.77	3.17	3.03	0.98
Succorance	To solicit sympathy, affection, or emotional support from others	0.29	2.68	-0.18	3.00	-0.16
Deference	To seek and maintain subordinate roles in relationships with others	2.08	2.81	0.28	3.37	-0.56
Self-Control	To control one's behaviors and emotions	2.33	2.63	-0.15	2.89	-0.88
Self-Confidence	Poise, self-assurance, and belief in one's ability to achieve one's goals	3.29	4.18	6.15	5.41	0.56
Personal Adjustment	The ability to cope with situational and interpersonal demands, and a feeling of efficacy	4.33	4.29	5.67	4.33	0.31
Ideal Self	Strong sense of personal worth; or harmony between what one is and what one wants to be	3.46	5.36	4.94	4.99	0.29
Creative Personality	The desire to do and think differently from the norm, and a talent for originality	0.46	3.50	3.51	4.08	0.77
Military Leadership	Steadiness, self-discipline, and good judgment of the kind required in positions of military (or related) leadership	6.50	4.19	7.53	5.39	0.20
Adult	Attitudes of independence, objectivity, and industriousness associated with the concept of "mature adult"	6.04	4.86	6.60	5.52	0.10

Note: Judging, n = 24; Perceiving, n = 72.

Table 17 | CPI 260° scale means, standard deviations, and Cohen's d for Global Step I" E-I preferences: Danish sample

		Extrave	rsion	Introve		
CPI 260° scale	CPI 260° scale description	М	SD	М	SD	Cohen's d
Dominance (Do)	Prosocial interpersonal power and influence	22.15	5.59	14.45	6.53	-1.26
Capacity for Status (Cs)	Ambition for challenge and social status	15.68	3.22	11.82	3.70	-1.11
Sociability (Sy)	Social participation	17.22	2.72	11.86	4.58	-1.39
Social Presence (Sp)	Poise and comfort with attention and recognition	19.85	3.35	15.80	4.20	-1.06
Self-acceptance (Sa)	Sense of personal worth and self-confidence	15.20	2.93	11.39	3.73	-1.12
Independence (In)	Self-sufficiency and self-directedness	15.69	3.30	12.42	4.35	-0.84
Empathy (Em)	Capacity to understand and respond to others' needs	14.98	3.28	12.56	2.97	-0.78
Responsibility (Re)	Conscientiousness and follow-through	16.44	2.75	15.61	3.38	-0.27
Social Conformity (So)	Conformance with social norms and customs	20.19	4.23	19.44	4.31	-0.18
Self-control (Sc)	Cautiousness and self-regulation	15.42	4.13	17.03	4.88	0.35
Good Impression (Gi)	Tact and positive self-presentation	14.53	3.81	14.21	4.63	-0.07
Communality (Cm)	Conventional behavior and attitudes	18.73	1.69	18.08	2.22	-0.33
Well-being (Wb)	Overall sense of health and optimism	15.63	3.15	13.59	3.82	-0.58
Tolerance (To)	Open-mindedness and respect for others	13.44	3.32	12.51	3.55	-0.27
Achievement via Conformance (Ac)	Motivation within organized settings	19.61	3.50	18.45	3.99	-0.31
Achievement via Independence (Ai)	Motivation within unstructured settings	15.85	3.82	14.79	3.93	-0.27
Conceptual Fluency (Cf)	Comfort with intellectual and conceptual matters	21.00	3.74	18.54	4.36	-0.60
Insightfulness (Is)	Analytical insight into the motivations of others	13.37	2.73	12.56	3.26	-0.27
Flexibility (Fx)	Adaptability and comfort with change	9.97	3.31	9.52	4.30	-0.12
Sensitivity (Sn)	Tough- versus tender-mindedness	12.08	3.11	14.11	3.54	0.61
Managerial Potential (Mp)	Inclination for supervisory responsibilities	17.46	3.72	14.27	4.26	-0.79
Work Orientation (Wo)	Sense of dedication to work	17.20	2.98	15.94	3.16	-0.41
Creative Temperament (Ct)	Individualization and capacity for innovativeness	16.80	3.90	14.01	4.32	-0.67
Leadership (Lp)	Initiative and effectiveness in leading others	27.05	5.02	19.82	6.51	-1.23
Amicability (Ami)	Cooperation and friendliness	19.46	4.26	18.27	4.44	-0.27
Law Enforcement Orientation (Leo)	Conventional and practical values	18.25	2.84	16.30	3.52	-0.60
Vector 1 (v.1)	Extraversion versus introversion	9.19	4.69	13.48	4.15	0.97
Vector 2 (v.2)	Rule-following versus rule-questioning	12.63	2.80	12.54	3.37	-0.03
Vector 3 (v.3)	Fulfillment of personal potential	18.42	5.45	17.23	5.20	-0.22

Note: Extraversion, n = 59; Introversion, n = 71. See appendix C of the 2018 MBTI manual for more detailed descriptions of the CPI 260 scales. For information on Cohen's d, see note 3 at the back of this supplement.

Table 18 | CPI 260° scale means, standard deviations, and Cohen's *d* for Global Step I[™] S−N preferences: Danish sample

		Sens	ing	Intuit	ion		
CPI 260° scale	CPI 260° scale description	М	SD	М	SD	Cohen's d	
Dominance (Do)	Prosocial interpersonal power and influence	15.76	6.84	21.44	6.42	0.85	
Capacity for Status (Cs)	Ambition for challenge and social status	12.15	3.81	15.84	3.13	1.04	
Sociability (Sy)	Social participation	12.92	4.67	16.48	3.81	0.82	
Social Presence (Sp)	Poise and comfort with attention and recognition	16.09	4.06	20.12	3.53	1.04	
Self-acceptance (Sa)	Sense of personal worth and self-confidence	11.95	3.87	15.00	3.10	0.85	
Independence (In)	Self-sufficiency and self-directedness	12.81	4.20	15.66	3.68	0.71	
Empathy (Em)	Capacity to understand and respond to others' needs	12.28	2.96	15.88	2.63	1.27	
Responsibility (Re)	Conscientiousness and follow-through	15.74	2.94	16.38	3.40	0.20	
Social Conformity (So)	Conformance with social norms and customs	20.16	3.87	19.16	4.82	-0.23	
Self-control (Sc)	Cautiousness and self-regulation	17.38	4.49	14.58	4.30	-0.63	
Good Impression (Gi)	Tact and positive self-presentation	15.21	4.10	12.98	4.20	-0.54	
Communality (Cm)	Conventional behavior and attitudes	18.25	2.12	18.58	1.84	0.16	
Well-being (Wb)	Overall sense of health and optimism	14.31	3.45	14.84	4.00	0.14	
Tolerance (To)	Open-mindedness and respect for others	12.53	3.58	13.58	3.22	0.31	
Achievement via Conformance (Ac)	Motivation within organized settings	18.96	3.52	19.00	4.27	0.01	
Achievement via Independence (Ai)	Motivation within unstructured settings	14.30	3.71	16.82	3.73	0.68	
Conceptual Fluency (Cf)	Comfort with intellectual and conceptual matters	18.40	4.16	21.66	3.63	0.82	
Insightfulness (Is)	Analytical insight into the motivations of others	12.36	2.83	13.84	3.19	0.50	
Flexibility (Fx)	Adaptability and comfort with change	8.15	3.55	12.24	2.94	1.23	
Sensitivity (Sn)	Tough- versus tender-mindedness	13.50	3.41	12.70	3.60	-0.23	
Managerial Potential (Mp)	Inclination for supervisory responsibilities	15.11	4.27	16.68	4.24	0.37	
Work Orientation (Wo)	Sense of dedication to work	16.50	2.71	16.54	3.74	0.01	
Creative Temperament (Ct)	Individualization and capacity for innovativeness	13.35	3.90	18.36	3.07	1.39	
Leadership (Lp)	Initiative and effectiveness in leading others	21.55	6.63	25.58	6.61	0.61	
Amicability (Ami)	Cooperation and friendliness	18.90	4.06	18.66	4.90	-0.05	
Law Enforcement Orientation (Leo)	Conventional and practical values	17.56	3.14	16.58	3.64	-0.29	
Vector 1 (v.1)	Extraversion versus introversion	12.97	4.47	9.22	4.66	-0.83	
Vector 2 (v.2)	Rule-following versus rule-questioning	13.26	2.92	11.48	3.13	-0.59	
Vector 3 (v.3)	Fulfillment of personal potential	17.06	5.43	18.90	5.02	0.35	

Note: Sensing, n = 80; Intuition, n = 50.

Table 19 | CPI 260° scale means, standard deviations, and Cohen's *d* for Global Step I[™] T−F preferences: Danish sample

		Think	ing	Feeli		
CPI 260° scale	CPI 260° scale description	М	SD	М	SD	Cohen's d
Dominance (Do)	Prosocial interpersonal power and influence	19.41	6.95	16.44	7.22	-0.42
Capacity for Status (Cs)	Ambition for challenge and social status	14.02	3.83	13.11	4.11	-0.23
Sociability (Sy)	Social participation	14.53	4.85	14.05	4.52	-0.10
Social Presence (Sp)	Poise and comfort with attention and recognition	17.97	4.22	17.30	4.44	-0.15
Self-acceptance (Sa)	Sense of personal worth and self-confidence	13.82	3.67	12.41	3.98	-0.37
Independence (In)	Self-sufficiency and self-directedness	15.47	3.38	12.30	4.43	-0.81
Empathy (Em)	Capacity to understand and respond to others' needs	13.52	3.31	13.81	3.37	0.09
Responsibility (Re)	Conscientiousness and follow-through	15.98	2.90	15.98	3.37	0.00
Social Conformity (So)	Conformance with social norms and customs	20.12	4.18	19.42	4.38	-0.16
Self-control (Sc)	Cautiousness and self-regulation	16.41	4.37	16.19	4.87	-0.05
Good Impression (Gi)	Tact and positive self-presentation	14.85	4.13	13.84	4.37	-0.24
Communality (Cm)	Conventional behavior and attitudes	18.26	2.07	18.50	1.97	0.12
Well-being (Wb)	Overall sense of health and optimism	15.41	3.30	13.59	3.82	-0.51
Tolerance (To)	Open-mindedness and respect for others	12.74	3.42	13.13	3.54	0.11
Achievement via Conformance (Ac)	Motivation within organized settings	19.62	3.78	18.31	3.75	-0.35
Achievement via Independence (Ai)	Motivation within unstructured settings	15.35	3.55	15.19	4.27	-0.04
Conceptual Fluency (Cf)	Comfort with intellectual and conceptual matters	20.30	4.18	18.98	4.27	-0.31
Insightfulness (Is)	Analytical insight into the motivations of others	13.47	2.70	12.38	3.30	-0.36
Flexibility (Fx)	Adaptability and comfort with change	9.18	3.68	10.28	4.01	0.29
Sensitivity (Sn)	Tough- versus tender-mindedness	11.98	3.13	14.00	3.43	0.75
Managerial Potential (Mp)	Inclination for supervisory responsibilities	16.05	4.11	15.37	4.52	-0.16
Work Orientation (Wo)	Sense of dedication to work	16.91	2.64	16.11	3.54	-0.26
Creative Temperament (Ct)	Individualization and capacity for innovativeness	15.18	4.41	15.37	4.31	0.04
Leadership (Lp)	Initiative and effectiveness in leading others	24.55	6.71	21.61	6.79	-0.44
Amicability (Ami)	Cooperation and friendliness	18.68	3.90	18.94	4.86	0.06
Law Enforcement Orientation (Leo)	Conventional and practical values	17.97	3.22	16.38	3.33	-0.49
Vector 1 (v.1)	Extraversion versus introversion	10.98	4.77	12.09	4.97	0.23
Vector 2 (v.2)	Rule-following versus rule-questioning	13.18	2.76	11.95	3.35	-0.40
Vector 3 (v.3)	Fulfillment of personal potential	17.41	4.88	18.14	5.77	0.14

Note: Thinking, n = 66; Feeling, n = 64.

Table 20 | CPI 260° scale means, standard deviations, and Cohen's *d* for Global Step I[™] J−P preferences: Danish sample

		Judg	ing	Percei	ving	Cohen's d	
CPI 260° scale	CPI 260° scale description	М	SD	М	SD		
Dominance (Do)	Prosocial interpersonal power and influence	16.58	6.67	18.86	7.45	0.32	
Capacity for Status (Cs)	Ambition for challenge and social status	12.75	3.79	14.12	4.03	0.35	
Sociability (Sy)	Social participation	13.77	4.65	14.64	4.70	0.19	
Social Presence (Sp)	Poise and comfort with attention and recognition	16.83	4.06	18.18	4.43	0.31	
Self-acceptance (Sa)	Sense of personal worth and self-confidence	12.23	3.76	13.72	3.87	0.39	
Independence (In)	Self-sufficiency and self-directedness	13.73	3.77	14.03	4.53	0.07	
Empathy (Em)	Capacity to understand and respond to others' needs	13.06	3.24	14.06	3.34	0.30	
Responsibility (Re)	Conscientiousness and follow-through	16.29	3.27	15.78	3.03	-0.16	
Social Conformity (So)	Conformance with social norms and customs	21.25	3.74	18.79	4.35	-0.60	
Self-control (Sc)	Cautiousness and self-regulation	18.02	4.29	15.15	4.48	-0.65	
Good Impression (Gi)	Tact and positive self-presentation	15.77	4.00	13.41	4.19	-0.57	
Communality (Cm)	Conventional behavior and attitudes	18.73	1.74	18.14	2.16	-0.29	
Well-being (Wb)	Overall sense of health and optimism	15.29	3.13	14.00	3.92	-0.36	
Tolerance (To)	Open-mindedness and respect for others	13.35	3.53	12.65	3.43	-0.20	
Achievement via Conformance (Ac)	Motivation within organized settings	20.21	3.26	18.15	3.94	-0.56	
Achievement via Independence (Ai)	Motivation within unstructured settings	15.37	3.83	15.21	3.98	-0.04	
Conceptual Fluency (Cf)	Comfort with intellectual and conceptual matters	19.90	3.72	19.49	4.60	-0.10	
Insightfulness (Is)	Analytical insight into the motivations of others	12.71	2.95	13.08	3.12	0.12	
Flexibility (Fx)	Adaptability and comfort with change	8.42	3.96	10.59	3.58	0.58	
Sensitivity (Sn)	Tough- versus tender-mindedness	13.12	3.26	13.24	3.65	0.03	
Managerial Potential (Mp)	Inclination for supervisory responsibilities	16.08	4.23	15.47	4.38	-0.14	
Work Orientation (Wo)	Sense of dedication to work	17.12	2.71	16.12	3.34	-0.32	
Creative Temperament (Ct)	Individualization and capacity for innovativeness	13.37	4.25	16.55	3.94	0.78	
Leadership (Lp)	Initiative and effectiveness in leading others	22.90	6.40	23.23	7.23	0.05	
Amicability (Ami)	Cooperation and friendliness	19.92	4.19	18.06	4.38	-0.43	
Law Enforcement Orientation (Leo)	Conventional and practical values	17.63	3.46	16.88	3.28	-0.22	
Vector 1 (v.1)	Extraversion versus introversion	12.92	4.76	10.60	4.77	-0.49	
Vector 2 (v.2)	Rule-following versus rule-questioning	13.98	3.00	11.64	2.84	-0.81	
Vector 3 (v.3)	Fulfillment of personal potential	18.13	5.72	17.53	5.07	-0.11	

Note: Judging, n = 52; Perceiving, n = 78.

MBTI® GLOBAL STEP II" ASSESSMENT RESULTS FOR THE DANISH SAMPLE

The Global Step II assessment contains all 92 Global Step I items plus an additional 51 items needed to score the Step II facets, for a total of 143. Step II results expand on descriptions of the four preference pairs by providing information about five facets of each pair (see table 21). The Global Step II assessment replaces the Form Q assessment and the European Step II assessment.

Table 21 | Correlations between Global Step II*, Form Q, and European Step II* continuous scores: Danish sample

Global Step II" facet	Form Q correlation	European Step II [®] correlation
E-I facets		
Initiating-Receiving	.98	.97
Expressive-Contained	.99	.95
Gregarious-Intimate	.97	.99
Active-Reflective	.85	.90
Enthusiastic-Quiet	.99	.98
S-N facets		
Concrete-Abstract	.97	.96
Realistic-Imaginative	.99	.99
Practical-Conceptual	.86	.86
Experiential-Theoretical	.94	.98
Traditional-Original	.96	.96
T-F facets		
Logical-Empathetic	.93	.93
Reasonable-	.93	.96
Compassionate		
Questioning-	.66	.70
Accommodating		
Critical-Accepting	.78	.83
Tough-Tender	.98	.97
J-P facets		
Systematic-Casual	.96	.98
Planful-Open-Ended	.97	.98
Early Starting –	.94	.94
Pressure-Prompted		
Scheduled-	.95	.93
Spontaneous Methodical-Emergent	0.6	01
Methodical-Emergent	.96	.91

Note: N = 468.

Relationships Between MBTI° Global Step II", Form Q, and European Step II" Facet Results

Table 21 presents the relationships between MBTI Global Step II, Form Q, and European Step II facet results for the Danish sample. Most facet scales are highly correlated, as the table shows. The lower correlation on the Questioning–Accommodating scale reflects changes made to that scale when creating the Global Step II assessment.

Global Step II[™] Facet Intercorrelations

Intercorrelations of Global Step II facets are presented in table 22. Facets within each preference pair correlate higher with other facets of the same preference pair than with facets of different preference pairs.

Reliability and Validity of Global Step II™ Results

This section covers measurement properties for the Danish translation of the MBTI Global Step II assessment, including reliability and validity. For full Step II reliability and validity information for the global sample, refer to chapters 8 and 10 of the MBTI® Manual for the Global Step II® Assessments (Myers et al., 2018).

RELIABILITY

Internal consistency and test-retest reliabilities for Global Step II facets in the Danish sample are presented in table 23.

VALIDITY

Reported here as evidence of the validity of the Danish translation of the MBTI Global Step II assessment are the percentage of out-of-preference facet scores for each preference pair, correlations between preference pairs and facets, and correlations between the MBTI assessment and two other assessments.

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 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. 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 preferences for I, N, F, or P; or from 2 to 5 when a respondent has preferences 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 out-of-preference scores in three or more facets within any one preference pair. The percentage of out-of-preference facet scores for each preference pair in the Danish sample is shown in table 24.

Table 22 | Intercorrelations of Global Step II[®] facets: Danish sample

Global Step II* facet	1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.	12.	13.	14.	15.	16.	17.	18.	19.	20
E-I facets																				
1. Initiating-Receiving	_																			
2. Expressive-Contained	.66	_																		
3. Gregarious-Intimate	.61	.57	_																	
4. Active-Reflective	.73	.57	.59	_																
5. Enthusiastic-Quiet	.68	.60	.67	.69	_															
S-N facets																				
6. Concrete-Abstract	22	25	22	24	38	_														
7. Realistic-Imaginative	23	28	25	25	41	.76	_													
8. Practical-Conceptual	16	16	15	15	28	.67	.66	_												
9. Experiential—Theoretical	13	11	10	07	18	.44	.42	.38	_											
10. Traditional—Original	27	23	25	25	40	.65	.64	.65	.33	_										
T–F facets																				
11. Logical–Empathetic	20	38	28	23	34	.37	.40	.14	.18	.20	_									
12. Reasonable–Compassionate	15	30	27	14	32	.33	.39	.13	.17	.16	.80	_								
13. Questioning–Accommodating	.08	11	02	.02	06	.10	.18	08	03	15	.52	.56	_							
14. Critical-Accepting	27	33	29	24	39	.35	.38	.15	.08	.19	.60	.62	.68	_						
15. Tough–Tender	12	27	20	10	28	.35	.38	.16	.12	.18	.66	.70	.71	.72	_					
J–P facets																				
16. Systematic–Casual	28	30	27	25	40	.58	.57	.43	.24	.61	.49	.43	.20	.39	.41	_				
17. Planful-Open-Ended	17	15	16	14	24	.38	.35	.30	.17	.45	.19	.19	01	.10	.12	.64	_			
18. Early Starting-Pressure-Prompted	15	15	21	18	24	.34	.33	.30	.22	.42	.12	.13	05	.05	.11	.46	.55	_		
19. Scheduled-Spontaneous	17	16	19	15	26	.47	.43	.39	.21	.57	.23	.22	.00	.17	.20	.75	.75	.57	_	
20. Methodical-Emergent	08	11	11	06	10	.20	.22	.17	.12	.29	.17	.18	01	.02	.08	.48	.54	.49	.58	-

Note: N = 468.

Table 23 | Internal consistency and test-retest reliabilities of Global Step II[™] facet continuous scores: Danish sample

Global Step II [*] facet	Cronbach's alpha	Test-retest correlation
E-I facets		
Initiating-Receiving	.83	.83
Expressive-Contained	.79	.83
Gregarious-Intimate	.68	.70
Active-Reflective	.64	.80
Enthusiastic-Quiet	.74	.77
S-N facets		
Concrete-Abstract	.80	.83
Realistic-Imaginative	.76	.82
Practical-Conceptual	.75	.78
Experiential-Theoretical	.67	.69
Traditional-Original	.75	.80
T–F facets		
Logical-Empathetic	.80	.85
Reasonable - Compassionate	.75	.81
Questioning-Accommodating	.65	.74
Critical-Accepting	.67	.78
Tough-Tender	.81	.78
J-P facets		
Systematic-Casual	.80	.76
Planful-Open-Ended	.80	.75
Early Starting-Pressure-Prompted	.67	.78
Scheduled-Spontaneous	.82	.84
Methodical-Emergent	.67	.59

Note: N = 468; test-retest, n = 81.

Table 24 | Percentage of reported out-ofpreference Global Step II[™] facet scores: Danish sample

Preference	Numl	per of ou	t-of-pref	erence fa	acet score	es (%)
pair	0	1	2	3	4	5
E-I	77	20	3	<1	0	0
S-N	69	22	8	1	0	0
T-F	75	16	7	2	<1	0
J-P	62	26	10	1	0	0

Note: N = 468. Percentages may not total 100% due to the rounding of decimals.

Correlations between facets and preference pairs are presented in table 25. 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 theoretical hierarchical structure of the Step II facets

Table 25 | Correlations between Global Step II[™] facets and preference pairs: Danish sample

	Preference pair								
Global Step II" facet	E-I	S-N	T-F	J-P					
E-I facets									
Initiating-Receiving	.89	27	17	21					
Expressive-Contained	.79	27	35	22					
Gregarious-Intimate	.76	26	28	22					
Active-Reflective	.83	27	18	18					
Enthusiastic-Quiet	.84	44	35	31					
S-N facets									
Concrete-Abstract	30	.89	.37	.50					
Realistic-Imaginative	32	.88	.42	.49					
Practical-Conceptual	21	.80	.13	.41					
Experiential-Theoretical	14	.55	.16	.22					
Traditional-Original	32	.80	.17	.59					
T-F facets									
Logical-Empathetic	31	.35	.91	.29					
Reasonable – Compassionate	25	.32	.91	.27					
Questioning-	.00	.04	.68	.04					
Accommodating									
Critical-Accepting	35	.33	.74	.20					
Tough-Tender	21	.33	.83	.23					
J-P facets									
Systematic-Casual	33	.63	.48	.83					
Planful-Open-Ended	19	.43	.17	.87					
Early Starting – Pressure-Prompted	21	.40	.11	.64					
Scheduled-Spontaneous	20	.53	.21	.94					
Methodical–Emergent	09	.26	.14	.64					
-									

Note: N = 468.

in relation to the Step I scales" (Quenk, Hammer, & Majors, 2001, p. 104). The Danish sample correlations are comparable to those reported in the MBTI® Step II* Manual (Quenk et al., 2001) and the MBTI® Step II® Manual, European Edition (Quenk, Hammer, & Majors, 2004). The lowest correlation between a facet and its corresponding preference pair is between Experiential-Theoretical and S-N.

To further demonstrate convergent and divergent validity of the MBTI Global Step II facets in the Danish version, the facets were correlated with scales of two other assessments, the Adjective Check List (ACL) and the CPI 260° assessment. Descriptions of the relationships between the MBTI assessment and the other assessments follow.

ACL assessment. ACL scales correlated with the Global Step II facets; a selection of these correlations is presented in table 26. The relationships between

Table 26 | Selected correlations between Global Step II" facets and ACL scales: Danish sample

							ACL sca	ile					
Global Step II [™] facet	Communality	Dominance	Endurance	Order	Nurturance	Affiliation	Exhibition	Change	Deference	Self-Control	Self-Confidence	Personal Adjustment	Creative Personality
E-I facets													
Initiating-Receiving	19	51	14	06	31	33	56	31	.12	.26	44	29	16
Expressive – Contained	30	42	25	17	47	48	42	38	.01	.18	43	37	18
Gregarious – Intimate	13	35	14	.01	29	23	34	21	.00	.26	29	22	10
Active-Reflective	26	45	21	19	45	44	48	42	.07	.22	49	38	31
Enthusiastic-Quiet	19	43	15	08	39	37	54	41	.11	.37	47	29	30
S-N facets													
Concrete-Abstract	.18	.19	.08	.08	.23	.32	.38	.35	24	27	.35	.21	.47
Realistic-Imaginative	.01	.02	10	06	.10	.17	.29	.36	25	26	.20	.08	.42
Practical-Conceptual	.15	.10	.08	.12	.11	.25	.33	.36	31	28	.31	.16	.50
Experiential-Theoretical	.09	.07	11	07	.03	.00	.20	.09	12	16	.13	01	.23
Traditional-Original	.19	.25	.14	.19	.24	.39	.43	.42	34	33	.44	.26	.54
T–F facets													
Logical-Empathetic	08	13	13	26	.15	.10	.02	.13	.07	14	09	07	04
Reasonable-Compassionate	09	19	20	31	.17	.07	.04	.09	.17	11	11	07	07
Questioning-Accommodating	11	31	17	17	.17	.03	13	10	.22	.08	19	05	11
Critical-Accepting	.07	02	09	14	.37	.24	.23	.17	.09	09	.10	.13	.11
Tough-Tender	04	14	06	12	.30	.18	.04	.04	.16	06	.00	.06	.04
J-P facets													
Systematic-Casual	01	.04	10	15	.19	.26	.21	.29	13	25	.13	.10	.24
Planful-Open-Ended	.02	.07	.00	04	.09	.23	.17	.39	17	25	.17	.13	.29
Early Starting-Pressure-Prompted	.10	.17	01	.05	.04	.15	.29	.32	23	25	.24	.07	.32
Scheduled-Spontaneous	.03	.11	04	10	.04	.19	.22	.35	24	36	.20	.09	.35
Methodical-Emergent	03	.06	02	14	09	04	.05	.14	13	17	.09	.04	.12

Note: n = 96.

the MBTI Global Step II assessment and the ACL are consistent with those reported in the MBTI® Step II® Manual (Quenk et al., 2001) and the MBTI® Step II® Manual, European Edition (Quenk et al., 2004).

CPI 260° assessment. Correlations between the Global Step II facets and CPI 260 scales for the Danish sample are shown in table 27. The correlations reported here are similar to those found in the MBTI® Step II™ Manual (Quenk et al., 2001) for the CPI[™] 434 assessment, providing additional evidence of the validity of the MBTI Global Step II assessment.

Global Step II[™] Facet Distributions

Determining whether a particular score is in-preference, midzone, or out-of-preference provides the basis for recognizing and understanding individual differences

among people of the same type. When giving feedback to respondents, for practitioners the most important verification issue is the accuracy with which the scores reflect their placement at either pole or in the midzone. If a respondent disagrees with results on a facet, interpretation will be affected. For example, a respondent may judge a facet score that was reported as midzone to be actually out-of-preference or in-preference. In such an instance, statements in the report will be incorrect for that facet, so the practitioner must provide appropriate interpretive information that corresponds to the respondent's verified placement. Practitioners may refer to Understanding Your MBTI® Step II™ Results (Kummerow & Quenk, 2018) and MBTI® Step II™ User's Guide (Quenk & Kummerow, 2019) for interpretations of all possible Step II facet results.

Table 27 | Correlations between Global Step II[™] facets and CPI 260[®] scales: Danish sample

														CPI	260 ° s	cale													
Global Step II [™] facet	Do	Cs	Sy	Sp	Sa	ln	Em	Re	So	Sc	Gi	Cm	Wb	То	Ac	Ai	Cf	ls	Fx	Sn	Мр	Wo	Ct	Lp	Ami	Leo	v.1	v.2	٧.
E-I facets																													
Initiating-Receiving	65	60	68	52	65	53	44	23	06	.23	03	16	32	11	20	20	33	22	08	.31	37	18	40	63	11	30	.48	07	1
Expressive-Contained	48	46	55	45	56	30	40	21	03	.24	.05	19	22	07	22	11	21	07	08	.19	28	18	34	47	15	21	.43	09	1
Gregarious-Intimate	46	48	56	44	50	28	38	18	09	.20	03	11	23	18	15	13	21	18	05	.23	28	13	29	44	17	24	.42	04	C
Active-Reflective	57	51	65	52	55	38	47	23	14	.29	.04	15	30	19	15	20	24	17	10	.30	40	19	36	55	13	28	.53	09	1
Enthusiastic-Quiet	56	57	65	53	56	36	50	17	12	.32	.09	15	21	18	17	24	29	22	23	.22	36	11	45	49	12	19	.49	.06	1
S-N facets																													
Concrete-Abstract	.34	.48	.38	.44	.36	.24	.58	.20	17	28	20	.05	.03	.25	.01	.41	.37	.29	.58	.08	.24	.00	.67	.27	.02	24	36	33	.2
Realistic-Imaginative	.31	.44	.31	.43	.32	.23	.54	.04	25	34	31	08	08	.15	12	.29	.24	.16	.54	.08	.10	08	.58	.22	07	29	37	38	.1
Practical-Conceptual	.41	.47	.32	.39	.41	.35	.49	.10	20	32	22	08	.00	.15	.05	.30	.32	.25	.45	11	.16	02	.54	.31	08	11	43	25	.1
Experiential-Theoretical	.26	.42	.25	.31	.23	.23	.40	.24	.04	07	02	.07	.13	.22	.12	.36	.35	.24	.32	02	.19	.10	.48	.26	.11	16	22	09	. 2
Traditional-Original	.48	.53	.46	.54	.47	.43	.56	.09	18	36	21	05	.08	.16	04	.36	.34	.31	.45	21	.21	.06	.64	.41	05	10	47	34	.1
T-F facets																													
Logical-Empathetic	04	.02	.07	.01	.02	24	.17	04	21	17	21	03	31	08	19	11	17	23	.21	.37	12	25	.15	10	10	21	04	21	0
Reasonable – Compassionate	13	05	.00	06	10	29	.14	.00	14	09	16	09	32	02	19	05	15	23	.25	.40	11	23	.16	18	04	29	.05	22	.0
Questioning – Accommodating	36	21	21	18	30	37	.01	09	.07	.15	02	.01	14	.05	13	09	19	22	.11	.48	13	13	.00	32	.14	37	.29	10	.0
Critical-Accepting	.03	.15	.20	.16	.05	04	.36	.07	.02	.02	.02	.08	.03	.18	06	.12	.04	.03	.26	.28	.11	.06	.27	.09	.21	20	02	14	.2
Tough-Tender	14	.02	.04	.02	08	23	.22	.09	.05	.04	06	.11	10	.12	08	.09	07	07	.31	.39	01	.01	.25	12	.19	28	.09	18	.1
J-P facets																													
Systematic-Casual	.17	.24	.19	.27	.22	.07	.35	06	31	32	29	08	16	03	26	.07	.05	.09	.44	.12	06	19	.50	.05	19	23	23	48	.(
Planful-Open-Ended	.09	.16	.08	.22	.21	.04	.18	10	31	25	27	06	11	09	35	.03	01	.03	.30	.03	12	09	.36	.01	12	16	17	35	0
Early Starting— Pressure-Prompted	.22	.18	.13	.26	.29	.14	.18	.00	15	35	30	07	.03	.01	13	.12	.11	.13	.21	20	.05	07	.36	.09	15	10	34	23	.(
Scheduled-Spontaneous	.18	.24	.15	.29	.28	.11	.28	10	40	40	36	12	15	05	38	.08	.06	.11	.45	01	08	14	.55	.03	23	27	27	51	
Methodical-Emergent	03	.05	10	.06	.03	04	.15	13	28	27	31	16	19	20	32	05	11	.00	.28	.03	24	21	.23	14	22	16	06	38	:

Note: n = 130.

Table 28 | In-preference, midzone, and out-of-preference percentages and rankings for the Global Step II™ facets: Danish sample

	In-pre	ference	Mid	zone	Out-of-preference		
Global Step II [®] facet	%	Rank	%	Rank	%	Rank	
E-I facets							
Initiating-Receiving	67.09	3	30.13	10	2.78	16	
Expressive-Contained	61.75	10	31.41	7	6.84	11	
Gregarious-Intimate	60.90	13	31.41	7	7.69	7	
Active-Reflective	55.98	17	39.53	3	4.49	14	
Enthusiastic-Quiet	65.60	6	28.63	12	5.77	13	
S-N facets							
Concrete-Abstract	67.74	2	28.63	12	3.63	15	
Realistic-Imaginative	69.66	1	27.56	15	2.78	16	
Practical-Conceptual	66.45	5	23.72	18	9.83	6	
Experiential-Theoretical	53.85	19	29.91	11	16.24	4	
Traditional-Original	55.56	18	36.75	6	7.69	7	
T–F facets							
Logical-Empathetic	61.97	9	37.18	4	0.85	20	
Reasonable-Compassionate	58.12	15	39.96	2	1.92	18	
Questioning-Accommodating	48.93	20	40.38	1	1.68	5	
Critical-Accepting	58.12	15	25.21	17	16.67	2	
Tough-Tender	64.32	8	28.63	12	7.05	9	
J-P facets							
Systematic-Casual	61.75	10	31.20	9	7.05	9	
Planful-Open-Ended	67.09	3	26.50	16	6.41	12	
Early Starting-Pressure-Prompted	58.33	14	23.29	19	18.38	1	
Scheduled-Spontaneous	61.11	12	37.18	4	1.71	19	
Methodical-Emergent	65.17	7	18.38	20	16.45	3	

Note: N = 468.

Table 28 shows the percentages and rank order of in-preference, midzone, and out-of-preference scores for the 20 Global Step II facets for the Danish sample. Interpreters may find this table useful because it shows which facets are more or less likely to yield scores in these three categories. There are wide variations in the frequency with which facet scores are likely to be out-ofpreference. Here, the facet with the highest percentage

of out-of-preference scores is Early Starting-Pressure-Prompted at 18.38%, followed by Critical-Accepting at 16.67%. The Logical-Empathetic facet (0.85%) and the Scheduled-Spontaneous facet (1.71%) appear least likely to elicit out-of-preference responses.

Gender differences on the Step II facets in the Danish sample are presented in table 29.

Table 29 | Means, standard deviations, and Cohen's d of the Global Step II[™] facets by total sample and gender: Danish sample

	Total s (N =		(n =		Wor (n =	Gender differenc	
Global Step II [™] facet	М	SD	М	SD	М	SD	Cohen's c
E-I facets							
Initiating-Receiving	0.07	0.88	0.13	0.82	0.02	0.92	0.12
Expressive-Contained	0.05	0.93	0.15	0.86	-0.03	0.99	0.20
Gregarious-Intimate	0.02	0.79	0.03	0.82	0.01	0.77	0.02
Active-Reflective	-0.01	0.80	0.05	0.75	-0.06	0.85	0.14
Enthusiastic-Quiet	0.00	0.87	0.12	0.85	-0.11	0.87	0.27
S-N facets							
Concrete-Abstract	-0.28	0.93	-0.37	0.92	-0.20	0.93	-0.19
Realistic-Imaginative	-0.30	0.86	-0.36	0.86	-0.24	0.86	-0.14
Practical-Conceptual	-0.22	0.88	-0.21	0.85	-0.23	0.91	0.02
Experiential-Theoretical	-0.22	0.79	-0.25	0.79	-0.18	0.79	-0.09
Traditional-Original	-0.14	0.86	-0.17	0.87	-0.12	0.86	-0.05
T–F facets							
Logical-Empathetic	-0.15	0.86	-0.39	0.87	0.06	0.79	-0.54
Reasonable-Compassionate	-0.11	0.86	-0.33	0.84	0.10	0.83	-0.52
Questioning-Accommodating	0.21	0.79	-0.03	0.78	0.43	0.73	-0.61
Critical-Accepting	0.20	0.79	0.00	0.81	0.38	0.74	-0.49
Tough-Tender	-0.05	0.93	-0.31	0.95	0.18	0.85	-0.55
J-P facets							
Systematic-Casual	0.06	0.93	-0.01	0.91	0.13	0.95	-0.15
Planful-Open-Ended	0.12	0.89	0.24	0.82	0.01	0.93	0.26
Early Starting-Pressure-Prompted	0.26	0.80	0.31	0.77	0.21	0.83	0.12
Scheduled-Spontaneous	0.19	0.88	0.25	0.87	0.13	0.89	0.14
Methodical-Emergent	0.35	0.82	0.41	0.84	0.30	0.80	0.13

Note: For information on Cohen's d, see note 3, below.

CONCLUSION

Initial analyses of the Danish translations of the MBTI Global Step I and Step II assessments demonstrate that they each have good internal consistency and testretest reliabilities and are consistent with those of prior forms of the MBTI assessment (i.e., Forms M and Q, European Step I and Step II). Validity was established in several ways. First, included in this supplement are mean ACL and CPI 260 scale differences between global Step I preferences. The differences show meaningful

and expected relationships between the assessments. Next, correlations of the Global Step II assessment with two other assessments (the ACL and CPI 260) show anticipated relationships. The percentage of out-ofpreference facet scores is also presented. While more research should be conducted, all these analyses show that the Danish translations of the MBTI Global Step I and Step II assessments have adequate reliability and validity and are appropriate for use with individuals in Denmark who read and understand Danish.

NOTES

- 1. The terms translation and adaptation are often used interchangeably in the testing and measurement literature. Historically, translation has been used to describe the process by which an assessment is converted to a language other than the one in which it was originally constructed. However, the term adaptation is increasingly being used to reflect the fact that an effective conversion of assessment items from one language to another often requires not a word-forword translation but rather a modification intended to maintain the general sense or purpose of those items in a particular language. Nevertheless, as the more readily understood term, translation is used here.
- 2. Correlation coefficients (typically identified by *r*) range from -1 to 1 and can be squared and used as effect sizes (measures of the practical significance of the relationship between the two variables in question). Cohen's guidelines regarding effect sizes indicate that $r^2 = .10$ is a small effect size, r = .30 is medium, and r = .50 is large (Cohen. 1988, 1992).
- 3. Cohen's *d* is an estimate of an effect size computed by taking the difference between the means of two groups and dividing by their pooled standard deviations. Because the metric is in standard deviation units, effect sizes can easily be compared to evaluate the magnitude of a difference. Cohen (1992) provides an overview of the computation of a variety of effect sizes, along with guidance on interpretation. Cohen proposed that d = .20be considered small, d = .50 be considered medium, and d = .80 be considered large. In psychological research, small to medium effect sizes are typical.

REFERENCES

- Capraro, R. M., & Capraro, M. M. (2002). Myers-Briggs Type Indicator® score reliability across studies: A meta-analytic reliability generalization study (Form M). Educational & Psychological Measurement, 62(4), 590-602.
- Cohen, J. (1988). Statistical power analysis for the behavioral sciences (2nd ed.). Hillsdale, NJ: Erlbaum.
- Cohen, J. (1992). A power primer. Psychological Bulletin, 112, 155-159
- Cronbach, L. J. (1951). Coefficient alpha and the internal structure of tests. Psychometrika, 16(3), 297-334.
- Dawis, R. V. (1987). Scale construction. Journal of Counseling Psychology, 34, 481-489.
- Ghiselli, E. E., Campbell, J. P., & Zedeck, S. (1981). Measurement theory for the behavioral sciences. San Francisco: W. H. Freeman.
- Gough, H. G., & Bradley, P. (2005). CPI 260° manual. Sunnyvale, CA: The Myers-Briggs Company.
- Gough, H. G., & Heilbrun, A. B. (1983). The Adjective Check List manual. Mountain View, CA: CPP, Inc.
- International Test Commission. (2005). International guidelines on test adaptation. Retrieved from www.intestcom.org/files/guideline_test_adaptation.pdf
- Kummerow, J. M., & Quenk, N. L. (2018). Understanding your MBTI® Step II™results: A step-by-step guide to your unique expression of type (2nd ed.). Sunnyvale, CA: The Myers-Briggs Company.
- Murphy, K. R., & Davidshofer, C. O. (2005). Psychological testing (6th ed.). Upper Saddle River, NJ: Prentice-Hall.
- Myers, I. B., McCaulley, M. H., Quenk, N. L., & Hammer, A. L. (1998). MBTI® manual: A guide to the development and use of the Myers-Briggs Type Indicator instrument (3rd ed.). Sunnyvale, CA: The Myers-Briggs Company.
- Myers, I. B., McCaulley, M. H., Quenk, N. L., & Hammer, A. L. (2018). MBTI® manual for the Global Step I™ and Step II™ assessments (4th ed.). Sunnyvale, CA: The Myers-Briggs
- OPP Ltd. (2009). MBTI[®] Step II[®] European data supplement. Oxford, England: Author.
- OPP Ltd. (2011). MBTI® Step I[™] instrument European data supplement. Oxford, England: Author.
- Quenk, N. L., Hammer, A. L., & Majors, M. S. (2001). MBTI® Step II[™] manual. Sunnyvale, CA: The Myers-Briggs
- Quenk, N. L., Hammer, A. L., & Majors, M. S. (2004). MBTI® Step II[™] manual, European edition. Sunnyvale, CA: The Myers-Briggs Company.
- Quenk, N. L., & Kummerow, J. M. (2019). MBTI® Step II" user's guide: Practitioner's tool for making the most of Global Step II[™] interpretations (2nd ed.). Sunnyvale, CA: The Myers-Briggs Company.