

MBTI® MANUAL GLOBAL SUPPLEMENT SERIES

Spain (European Spanish) Supplement to the MBTI[®] Manual for the Global Step I[™] and Step II[™] Assessments

Nancy A. Schaubhut Richard C. Thompson Michael L. Morris Justin J. Arneson



+1 800 624 1765 | www.themyersbriggs.com

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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.¹ 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. Participants 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 participants, 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 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 II assessments. It is critical to keep in mind that while analyses were conducted for each country/ language sample used in this supplement series and are summarized here, 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 Spain (European Spanish) sample—hereafter, *Spanish* sample—to the Global Step I and Step II assessments translated into the European Spanish language. Included in this supplement is a general description of the sample, along with statistical summaries, analyses, and type distributions based on those results.

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.

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

†Germany sample includes one individual residing in Switzerland.

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).^a 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 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 European Spanish–language version used in this global project.

OPP's original Euopean Spanish 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 European Spanish version was again evaluated by a professional linguist as well as in-country expert reviewers; modifications were made to item wordings to reflect improvements, changes in language usage since the original translation, or other corrections needed 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 agreed-upon 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 Spanish sample, best-fit type data for the sample are unavailable.

For the MBTI research form, specific sampling targets were set for each sample (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/ or other validity assessments. For some samples—for

Table 2 | Demographic summary: Spanish sample

Demographic	Target %	Actual %
Age group		
17–24 years	13	17
25–44 years	39	43
45–64 years	28	31
65+ years	19	9
Mean age: 41 years	—	-
Gender		
Female	51	53
Male	49	47
Country of residence		
Spain	_	100
Employment status		
Working full-time	46	49
Working part-time	6	10
Student	11	10
Looking after family/home	14	9
Long-term sick	13	1
Retired / not working for income / none of the above	10	21
No response	_	<1
Self-employed		
Yes	7	8
No	93	36
No response	_	56

Note: N = 564. Percentages in a given category may not total 100% due to rounding of decimals.

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 Spain who read Spanish was obtained from a market research firm. Targets were set based on the population of Spain and provided by OPP Ltd. Table 2 shows the demographic target and actual obtained percentages. The resulting Spanish sample consists of 564 individuals, 53% women and 47% men. The age range is 17–81, with an average of 41 years (standard deviation = 14.8). All individuals reported residing in Spain.

Table 3 | Reported MBTI[®] type distribution: Spanish sample

Ser	ısing	Intu			
Thinking	Fee	ling	Thinking		
ISTJ n = 77 13.7%	ISFJ n = 33 5.9%	INFJ n = 10 1.8%	INTJ n = 6 1.1%	Judging	Introv
ISTP n = 72 12.8%	ISFP n = 39 6.9%	INFP n = 18 3.2%	INTP n = 20 3.5%	Perceiving	Introversion
ESTP n = 60 10.6%	ESFP n = 48 8.5%	ENFP n = 41 7.3%	ENTP n = 22 3.9%	iving	Extrav
ESTJ n = 58 10.3%	ESFJ n = 42 7.4%	ENFJ <i>n</i> = 12 2.1%	ENTJ n = 6 1.1%	Judging	Extraversion

Note: N = 564.

Table 4 | Reported MBTI[®] preference and preference combination distributions: Spanish sample

Preferences		Orie	Orientation pairs		Pr	Process pairs			Orientation of energy and perceiving pairs		Judging and external orientation pairs			
	n	%		n	%		n	%		n	%		n	%
Е	289	51.2	EJ	118	20.9	ST	267	47.3	ES	208	36.9	тј	147	26.1
I	275	48.8	EP	171	30.3	SF	162	28.7	EN	81	14.4	ТР	174	30.9
S	429	76.1	IJ	126	22.3	NF	81	14.4	IS	221	39.2	FJ	97	17.2
Ν	135	23.9	IP	149	26.4	NT	54	9.6	IN	54	9.6	FP	146	25.9
т	321	56.9												
F	243	43.1												
J	244	43.3												
Р	320	56.7												

Note: N = 564.

MBTI[®] GLOBAL STEP I[®] ASSESSMENT RESULTS FOR THE SPANISH 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 Spanish 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 group are ISTJ and ISTP. The least common types are INTJ and ENTJ. As reported in the *MBTI*^{\circ} *Step I*^{\circ} *European Data Supplement* (OPP Ltd, 2009), the most common types in a general Spanish population sample (N = 1,527)

Table 5	Reported I	MBTI [®] type	distribution fo	or men: Spanish sample
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Ser	nsing	Intuition			
Thinking	Fee	ling	Thinking		
ISTJ n = 42 15.9%	ISFJ n = 7 2.7%	INFJ n = 6 2.3%	INTJ n = 4 1.5%	Judging	Introv
ISTP n = 43 16.3%	ISFP n = 16 6.1%	INFP <i>n</i> = 5 1.9%	INTP n = 14 5.3%	Perceiving	Introversion
ESTP n = 29 11.0%	ESFP n = 14 5.3%	ENFP n = 9 3.4%	ENTP n = 12 4.5%	iving	Extrav
ESTJ n = 39 14.8%	ESFJ n = 15 5.7%	ENFJ <i>n</i> = 4 1.5%	ENTJ n = 5 1.9%	Judging	Extraversion

Note: n = 264.

Table 6 | Reported MBTI[®] preference and preference combination distributions for men: Spanish sample

F	Preference	ces	Orie	ntation	pairs	Pr	ocess p	airs			f energy 1g pairs		ig and entation	external pairs
	n	%		n	%		n	%		n	%		n	%
Е	127	48.1	EJ	63	23.9	ST	153	58.0	ES	97	36.7	тј	90	34.1
I	137	51.9	EP	64	24.2	SF	52	19.7	EN	30	11.4	ТР	98	37.1
S	205	77.7	IJ	59	22.3	NF	24	9.1	IS	108	40.9	FJ	32	12.1
Ν	59	22.3	IP	78	29.5	NT	35	13.3	IN	29	11.0	FP	44	16.7
Т	188	71.2												
F	76	28.8												
J	122	46.2												
Р	142	53.8												

Note: n = 264.

at that time were ESTJ and ENTJ. The least common types in that sample were ISFP, INFP, and INFJ.

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 orientation pairs, EPs and IPs occur more frequently. In addition, Ss are more prevalent than Ns, Ts more than Fs, and Ps more than Js, while Es and Is are more evenly distributed.

Tables 5–8 show type and preference distributions by gender.

Table 7	Reported MBTI [®] 1	type distribution	for women: S	Spanish sample
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Sen	sing	Intuition			
Thinking	Fee	ling	Thinking		
ISTJ n = 35 11.7%	ISFJ n = 26 8.7%	INFJ n = 4 1.3%	INTJ n = 2 0.7%	Judging	Introv
ISTP n = 29 9.7%	ISFP n = 23 7.7%	INFP n = 13 4.3%	INTP n = 6 2.0%	Perceiving	Introversion
ESTP n = 31 10.3%	ESFP n = 34 11.3%	ENFP n = 32 10.7%	ENTP n = 10 3.3%	iving	Extrav
ESTJ n = 19 6.3%	ESFJ n = 27 9.0%	ENFJ n = 8 2.7%	ENTJ n = 1 0.3%	Judging	Extraversion

Note: n = 300.

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

I	Preferen	ces	Orie	ntation	pairs	Pr	ocess p	airs			f energy Ig pairs		ng and e intation	external pairs
	n	%		n	%		n	%		n	%		n	%
Е	162	54.0	EJ	55	18.3	ST	114	38.0	ES	111	37.0	тJ	57	19.0
I	138	46.0	EP	107	35.7	SF	110	36.7	EN	51	17.0	ТР	76	25.3
S	224	74.7	IJ	67	22.3	NF	57	19.0	IS	113	37.7	FJ	65	21.7
Ν	76	25.3	IP	71	23.7	NT	19	6.3	IN	25	8.3	FP	102	34.0
т	133	44.3												
F	167	55.7												
J	122	40.7												
Р	178	59.3												

Note: n = 300.

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 Spanish sample are shown in table 9.³ The overall agreement rate for whole types between the Global Step I and Form M assessments was 74%, while between the Global Step I and European Step I assessments it was 46%. 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 preference pair continuous scores in the Spanish 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

Table 9 | Relationships between MBTI[®] Global Step I[®], Form M, and European Step I[®] preference pair results: Spanish sample

E—I S—N	Global Step I" a preference pa		Global Step I" and European Step I" preference pair results				
Preference pair	Correlation between continuous scores	Agreement rate (%)	Correlation between continuous scores	Agreement rate (%)			
E-I	.96	91	.91	84			
S-N	.95	93	.88	86			
T–F	.98	94	.85	75			
J-P	.96	92	.86	79			
Overall agreement ra	ate for whole types	74		46			

Note: N = 564.

Table 10 | Intercorrelations of Global Step I^{**} preference pair continuous scores: Spanish and global samples

Preference pair	E-I	S-N	T-F	J-P
E–I S–N T–F J–P	21 19 14	20 .29 .40	15 .27 - .19	15 .48 .23

Note: Correlations for the Spanish sample (N = 564) are below the diagonal; those for the global sample (N = 16,773) are above the diagonal.

in table 10 above the diagonal. The Spanish sample findings are likewise consistent with those reported for Form M in the 1998 *MBTI*[®] *Manual* (Myers et al.).

Reliability and Validity of Global Step I" Results

This section covers measurement properties for the European Spanish translation of the MBTI Global Step I assessment used in Spain, including reliability and validity. For full reliability and validity information for the global sample, refer to 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

Table 11 | Internal consistency and test-retest reliabilities of Global Step I[®] preference pair continuous scores: Spanish and global samples

		Cronbach's alpha					
Sample	N	E-I	S-N	T-F	J-P		
Spanish Global	564 16,773	.88 .89	.84 .87	.86 .89	.84 .88		
		Test-retest correlation					
			_				
Sample (interval)	n	E-I	S-N	T-F	J-P		

		Test-retest agreement rate (%)						
Sample (interval)	n	E-I	S-N	T-F	J-P			
Spanish (≤15 weeks) Global (≤15 weeks)	115 1,762	78 84	84 86	78 79	76 79			

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, 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 Spanish sample and in the global sample for comparison purposes. The Spanish sample alphas range from .84 to .88. 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 Spanish sample are also presented in table 11. The testretest interval was ≤15 weeks. This table also shows the rate of test-retest agreement for each preference pair. Test-retest correlations and test-retest agreement rates are also shown for the global sample in this table for comparison purposes.

Table 12 shows the percentage of individuals who reported zero, one, two, three, or four preferences the same upon retest in the Spanish sample. Eighty 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 European Spanish version of the MBTI Global Step I assessment and the *Adjective Check List* (ACL; Gough & Heilbrun, 1983) as well as the CPI 260[®] assessment (Gough & Bradley, 2005).

ACL assessment. A portion of the Spanish sample participants (*n* = 81) 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: Spanish sample

		Number of preferences the same at retest (%)					
Sample (interval)	n	4	3	2	1	0	
Spanish (≤15 weeks)	115	43	37	15	4	1	

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 deviation⁴) for MBTI preferences for the Spanish sample are presented in tables 13-16.

CPI 260° assessment. The CPI 260 assessment measures personality characteristics intended to provide a clear and accurate description of the respondent to increase self-awareness and understanding (Gough & Bradley, 2005). A portion of the Spanish sample (n = 84) 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: Spanish sample

		Extrave	ersion	Introve	ersion	
ACL scale	ACL scale description	М	SD	М	SD	Cohen's d
Sum of number checked	Total number of adjectives checked	71.69	35.32	65.57	30.86	-0.19
Sum of favorable checked	Total number of favorable adjectives checked	35.60	16.30	29.76	14.29	-0.38
Sum of unfavorable checked	Total number of unfavorable adjectives checked	3.34	2.84	5.41	5.31	0.47
Communality	An indicator of providing common or similar responses compared to the responses of people in general	7.43	4.05	7.76	5.01	0.07
Achievement	To strive to be outstanding in pursuits of socially recognized significance	9.29	5.82	6.59	4.92	-0.51
Dominance	To seek and maintain a role as leader in groups, or to be influential and controlling in individual relationships	4.46	3.96	1.11	4.35	-0.80
Endurance	To persist in any task undertaken	7.20	5.21	6.89	4.55	-0.06
Order	To place special emphasis on neatness, organization, and planning in one's activities	6.69	5.06	6.22	4.50	-0.10
Intraception	To engage in attempts to understand one's behavior or the behavior of others	8.80	5.18	8.30	4.67	-0.10
Nurturance	To engage in behaviors that provide material or emotional benefits to others	10.40	5.75	8.57	5.19	-0.34
Affiliation	To seek and maintain numerous personal friendships	15.66	7.21	13.02	6.32	-0.39
Exhibition	To behave in such a way as to elicit the immediate attention of others	3.31	3.51	-0.24	3.48	-1.02
Autonomy	To act independently of others or of social values and expectations	1.63	2.95	0.96	3.41	-0.21
Aggression	To engage in behaviors that attack or hurt others	-0.43	3.35	-1.76	3.84	-0.37
Change	To seek novelty of experience and to avoid routine	2.77	3.46	1.61	3.46	-0.34
Succorance	To solicit sympathy, affection, or emotional support from others	1.29	2.44	2.37	3.50	0.35
Deference	To seek and maintain subordinate roles in relationships with others	-0.03	3.50	1.61	3.17	0.49
Self-Control	To control one's behaviors and emotions	-1.29	2.75	0.09	3.07	0.47
Self-Confidence	Poise, self-assurance, and belief in one's ability to achieve one's goals	7.91	4.51	3.33	4.85	-0.98
Personal Adjustment	The ability to cope with situational and interpersonal demands, and a feeling of efficacy	6.23	3.56	5.11	3.63	-0.31
Ideal Self	Strong sense of personal worth; or harmony between what one is and what one wants to be	6.20	5.27	2.39	4.57	-0.78
Creative Personality	The desire to do and think differently from the norm, and a talent for originality	2.63	2.93	1.57	3.65	-0.32
Military Leadership	Steadiness, self-discipline, and good judgment of the kind required in positions of military (or related) leadership	7.29	4.84	7.13	4.45	-0.03
Adult	Attitudes of independence, objectivity, and industriousness associated with the concept of "mature adult"	3.54	3.80	2.85	4.50	-0.17

Note: Extraversion, n = 35; Introversion, n = 46. For information on Cohen's d, see note 4 at the back of this supplement.

Table 14 | ACL scale means, standard deviations, and Cohen's *d* for Global Step I[™] S−N preferences: Spanish 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	64.07	31.69	78.04	33.95	0.43
Sum of favorable checked	Total number of favorable adjectives checked	30.30	14.61	37.00	16.42	0.44
Sum of unfavorable checked	Total number of unfavorable adjectives checked	4.53	4.84	4.50	3.71	-0.01
Communality	An indicator of providing common or similar responses compared to the responses of people in general	7.35	4.62	8.25	4.56	0.20
Achievement	To strive to be outstanding in pursuits of socially recognized significance	7.14	5.33	9.21	5.61	0.38
Dominance	To seek and maintain a role as leader in groups, or to be influential and controlling in individual relationships	2.00	4.44	3.88	4.40	0.42
Endurance	To persist in any task undertaken	6.75	5.03	7.67	4.29	0.19
Order	To place special emphasis on neatness, organization, and planning in one's activities	6.35	4.88	6.58	4.43	0.05
Intraception	To engage in attempts to understand one's behavior or the behavior of others	8.00	4.64	9.75	5.28	0.36
Nurturance	To engage in behaviors that provide material or emotional benefits to others	8.95	5.61	10.33	5.16	0.25
Affiliation	To seek and maintain numerous personal friendships	13.21	6.63	16.42	6.81	0.48
Exhibition	To behave in such a way as to elicit the immediate attention of others	0.61	3.55	2.92	4.26	0.61
Autonomy	To act independently of others or of social values and expectations	0.67	2.97	2.63	3.44	0.63
Aggression	To engage in behaviors that attack or hurt others	-1.72	3.51	0.08	3.81	0.50
Change	To seek novelty of experience and to avoid routine	1.30	2.96	4.04	3.92	0.84
Succorance	To solicit sympathy, affection, or emotional support from others	2.09	3.34	1.46	2.52	-0.20
Deference	To seek and maintain subordinate roles in relationships with others	1.44	3.40	-0.38	3.10	-0.55
Self-Control	To control one's behaviors and emotions	0.21	2.84	-2.21	2.70	-0.86
Self-Confidence	Poise, self-assurance, and belief in one's ability to achieve one's goals	4.49	5.01	7.25	5.25	0.54
Personal Adjustment	The ability to cope with situational and interpersonal demands, and a feeling of efficacy	5.39	3.63	6.08	3.62	0.19
Ideal Self	Strong sense of personal worth; or harmony between what one is and what one wants to be	3.39	4.85	5.58	5.80	0.43
Creative Personality	The desire to do and think differently from the norm, and a talent for originality	1.33	3.27	3.67	3.12	0.72
Military Leadership	Steadiness, self-discipline, and good judgment of the kind required in positions of military (or related) leadership	6.81	4.64	8.13	4.43	0.29
Adult	Attitudes of independence, objectivity, and industriousness associated with the concept of "mature adult"	3.37	4.35	2.63	3.85	-0.18

Note: Sensing, n = 57; Intuition, n = 24.

Table 15 | ACL scale means, standard deviations, and Cohen's *d* for Global Step I^{*} T–F preferences: Spanish 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	66.66	31.03	70.05	35.11	0.10
Sum of favorable checked	Total number of favorable adjectives checked	32.55	15.55	31.97	15.37	-0.04
Sum of unfavorable checked	Total number of unfavorable adjectives checked	4.14	4.12	4.97	4.95	0.19
Communality	An indicator of providing common or similar responses compared to the responses of people in general	7.64	4.47	7.59	4.80	-0.01
Achievement	To strive to be outstanding in pursuits of socially recognized significance	8.27	5.15	7.14	5.83	-0.21
Dominance	To seek and maintain a role as leader in groups, or to be influential and controlling in individual relationships	3.80	3.58	1.08	5.02	-0.63
Endurance	To persist in any task undertaken	7.25	4.72	6.76	4.97	-0.10
Order	To place special emphasis on neatness, organization, and planning in one's activities	6.86	4.32	5.89	5.18	-0.21
Intraception	To engage in attempts to understand one's behavior or the behavior of others	8.73	4.93	8.27	4.86	-0.09
Nurturance	To engage in behaviors that provide material or emotional benefits to others	8.61	5.23	10.24	5.72	0.30
Affiliation	To seek and maintain numerous personal friendships	14.32	6.78	13.97	6.91	-0.05
Exhibition	To behave in such a way as to elicit the immediate attention of others	1.82	3.57	0.68	4.22	-0.29
Autonomy	To act independently of others or of social values and expectations	1.52	3.08	0.92	3.39	-0.19
Aggression	To engage in behaviors that attack or hurt others	-0.61	3.09	-1.86	4.21	-0.34
Change	To seek novelty of experience and to avoid routine	2.02	3.33	2.22	3.71	0.06
Succorance	To solicit sympathy, affection, or emotional support from others	0.91	2.44	3.08	3.44	0.74
Deference	To seek and maintain subordinate roles in relationships with others	0.25	3.12	1.68	3.59	0.43
Self-Control	To control one's behaviors and emotions	-0.80	2.74	-0.16	3.28	0.21
Self-Confidence	Poise, self-assurance, and belief in one's ability to achieve one's goals	5.93	4.51	4.57	5.91	-0.26
Personal Adjustment	The ability to cope with situational and interpersonal demands, and a feeling of efficacy	5.75	3.75	5.41	3.51	-0.09
Ideal Self	Strong sense of personal worth; or harmony between what one is and what one wants to be	5.14	5.25	2.73	4.91	-0.47
Creative Personality	The desire to do and think differently from the norm, and a talent for originality	2.30	3.07	1.70	3.73	-0.17
Military Leadership	Steadiness, self-discipline, and good judgment of the kind required in positions of military (or related) leadership	7.25	4.06	7.14	5.21	-0.02
Adult	Attitudes of independence, objectivity, and industriousness associated with the concept of "mature adult"	3.77	4.03	2.41	4.33	-0.33

Note: Thinking, n = 44; Feeling, n = 37.

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

		Judg	ing	Perce	iving	
ACL scale	ACL scale description	М	SD	М	SD	Cohen's d
Sum of number checked	Total number of adjectives checked	66.23	29.79	70.57	36.32	0.13
Sum of favorable checked	Total number of favorable adjectives checked	31.16	14.38	33.62	16.58	0.16
Sum of unfavorable checked	Total number of unfavorable adjectives checked	4.75	4.86	4.24	4.10	-0.11
Communality	An indicator of providing common or similar responses compared to the responses of people in general	7.23	4.85	8.08	4.28	0.19
Achievement	To strive to be outstanding in pursuits of socially recognized significance	7.09	5.15	8.54	5.78	0.27
Dominance	To seek and maintain a role as leader in groups, or to be influential and controlling in individual relationships	1.84	4.70	3.41	4.10	0.35
Endurance	To persist in any task undertaken	7.34	4.87	6.65	4.79	-0.14
Order	To place special emphasis on neatness, organization, and planning in one's activities	7.16	4.63	5.54	4.75	-0.35
Intraception	To engage in attempts to understand one's behavior or the behavior of others	8.25	4.40	8.84	5.43	0.12
Nurturance	To engage in behaviors that provide material or emotional benefits to others	8.82	5.66	10.00	5.27	0.22
Affiliation	To seek and maintain numerous personal friendships	13.50	6.48	14.95	7.18	0.21
Exhibition	To behave in such a way as to elicit the immediate attention of others	0.39	3.93	2.38	3.62	0.53
Autonomy	To act independently of others or of social values and expectations	0.98	3.28	1.57	3.16	0.18
Aggression	To engage in behaviors that attack or hurt others	-1.70	3.84	-0.57	3.41	0.31
Change	To seek novelty of experience and to avoid routine	0.77	2.93	3.70	3.45	0.92
Succorance	To solicit sympathy, affection, or emotional support from others	1.75	3.35	2.08	2.85	0.11
Deference	To seek and maintain subordinate roles in relationships with others	1.57	3.39	0.11	3.27	-0.44
Self-Control	To control one's behaviors and emotions	0.11	2.87	-1.24	3.01	-0.46
Self-Confidence	Poise, self-assurance, and belief in one's ability to achieve one's goals	4.27	5.24	6.54	4.95	0.44
Personal Adjustment	The ability to cope with situational and interpersonal demands, and a feeling of efficacy	5.41	3.64	5.81	3.64	0.11
Ideal Self	Strong sense of personal worth; or harmony between what one is and what one wants to be	3.66	4.95	4.49	5.55	0.16
Creative Personality	The desire to do and think differently from the norm, and a talent for originality	1.55	3.55	2.59	3.12	0.31
Military Leadership	Steadiness, self-discipline, and good judgment of the kind required in positions of military (or related) leadership	6.95	4.33	7.49	4.92	0.12
Adult	Attitudes of independence, objectivity, and industriousness associated with the concept of "mature adult"	3.52	4.39	2.70	3.98	-0.20

Note: Judging, n = 44; Perceiving, n = 37.

Table 17 | CPI 260° scale means, standard deviations, and Cohen's *d* for Global Step I[°] E–I preferences: Spanish sample

		Extrave	rsion	Introve	rsion	
CPI 260° scale	CPI 260° scale description	М	SD	М	SD	Cohen's d
Dominance (Do)	Prosocial interpersonal power and influence	20.38	5.43	15.10	6.05	-0.92
Capacity for Status (Cs)	Ambition for challenge and social status	13.90	3.70	11.88	3.01	-0.60
Sociability (Sy)	Social participation	15.60	3.56	11.57	4.22	-1.03
Social Presence (Sp)	Poise and comfort with attention and recognition	17.43	3.88	16.07	3.38	-0.37
Self-acceptance (Sa)	Sense of personal worth and self-confidence	13.24	2.97	10.40	3.54	-0.87
Independence (In)	Self-sufficiency and self-directedness	14.36	3.47	12.29	4.22	-0.54
Empathy (Em)	Capacity to understand and respond to others' needs	13.60	3.79	12.21	2.51	-0.43
Responsibility (Re)	Conscientiousness and follow-through	15.24	3.29	14.74	3.71	-0.14
Social Conformity (So)	Conformance with social norms and customs	19.07	4.49	18.90	4.93	-0.04
Self-control (Sc)	Cautiousness and self-regulation	15.45	4.95	15.50	4.94	0.01
Good Impression (Gi)	Tact and positive self-presentation	15.33	4.46	13.81	4.66	-0.33
Communality (Cm)	Conventional behavior and attitudes	17.71	2.95	18.00	2.82	0.10
Well-being (Wb)	Overall sense of health and optimism	13.26	4.11	12.76	3.98	-0.12
Tolerance (To)	Open-mindedness and respect for others	10.67	3.92	10.07	4.14	-0.15
Achievement via Conformance (Ac)	Motivation within organized settings	20.00	4.55	18.43	4.76	-0.34
Achievement via Independence (Ai)	Motivation within unstructured settings	13.10	3.77	13.21	3.52	0.03
Conceptual Fluency (Cf)	Comfort with intellectual and conceptual matters	18.19	4.79	17.10	3.87	-0.25
Insightfulness (Is)	Analytical insight into the motivations of others	11.83	2.97	12.26	3.18	0.14
Flexibility (Fx)	Adaptability and comfort with change	8.38	3.07	8.10	3.52	-0.09
Sensitivity (Sn)	Tough- versus tender-mindedness	13.40	3.49	13.81	2.90	0.13
Managerial Potential (Mp)	Inclination for supervisory responsibilities	13.50	4.07	11.98	3.61	-0.40
Work Orientation (Wo)	Sense of dedication to work	14.69	4.42	14.64	4.13	-0.01
Creative Temperament (Ct)	Individualization and capacity for innovativeness	14.55	3.41	12.90	3.11	-0.50
Leadership (Lp)	Initiative and effectiveness in leading others	24.64	6.22	19.57	6.08	-0.82
Amicability (Ami)	Cooperation and friendliness	16.14	5.07	16.02	5.45	-0.02
Law Enforcement Orientation (Leo)	Conventional and practical values	16.98	3.23	15.69	2.99	-0.41
Vector 1 (v.1)	Extraversion versus introversion	10.02	3.67	11.98	4.43	0.48
Vector 2 (v.2)	Rule-following versus rule-questioning	13.40	3.13	12.62	3.57	-0.23
Vector 3 (v.3)	Fulfillment of personal potential	14.10	5.62	14.12	5.32	0.00

Note: Extraversion, n = 42; Introversion, n = 42. For information on Cohen's d, see note 4 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: Spanish 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	16.98	6.35	20.15	5.65	0.51
Capacity for Status (Cs)	Ambition for challenge and social status	12.14	3.18	15.30	3.48	0.97
Sociability (Sy)	Social participation	13.08	4.48	15.20	3.69	0.49
Social Presence (Sp)	Poise and comfort with attention and recognition	16.03	3.58	19.05	3.05	0.87
Self-acceptance (Sa)	Sense of personal worth and self-confidence	11.25	3.53	13.65	3.00	0.70
Independence (In)	Self-sufficiency and self-directedness	12.70	3.97	15.30	3.37	0.68
Empathy (Em)	Capacity to understand and respond to others' needs	12.22	3.00	15.10	3.19	0.95
Responsibility (Re)	Conscientiousness and follow-through	14.89	3.62	15.30	3.11	0.12
Social Conformity (So)	Conformance with social norms and customs	18.98	5.04	19.00	3.42	0.00
Self-control (Sc)	Cautiousness and self-regulation	15.78	5.25	14.50	3.59	-0.26
Good Impression (Gi)	Tact and positive self-presentation	14.63	4.78	14.40	4.07	-0.05
Communality (Cm)	Conventional behavior and attitudes	17.80	3.07	18.05	2.16	0.09
Well-being (Wb)	Overall sense of health and optimism	12.86	4.34	13.50	2.84	0.16
Tolerance (To)	Open-mindedness and respect for others	10.00	4.05	11.55	3.78	0.39
Achievement via Conformance (Ac)	Motivation within organized settings	18.86	4.79	20.35	4.28	0.32
Achievement via Independence (Ai)	Motivation within unstructured settings	12.83	3.69	14.20	3.27	0.38
Conceptual Fluency (Cf)	Comfort with intellectual and conceptual matters	17.23	4.67	18.95	2.93	0.40
Insightfulness (Is)	Analytical insight into the motivations of others	11.56	3.14	13.60	2.23	0.69
Flexibility (Fx)	Adaptability and comfort with change	8.05	3.37	8.85	2.98	0.24
Sensitivity (Sn)	Tough- versus tender-mindedness	13.69	3.28	13.35	2.96	-0.11
Managerial Potential (Mp)	Inclination for supervisory responsibilities	12.53	4.00	13.40	3.59	0.22
Work Orientation (Wo)	Sense of dedication to work	14.48	4.39	15.25	3.80	0.18
Creative Temperament (Ct)	Individualization and capacity for innovativeness	12.92	3.15	16.30	2.60	1.11
Leadership (Lp)	Initiative and effectiveness in leading others	21.08	6.70	25.40	5.27	0.68
Amicability (Ami)	Cooperation and friendliness	15.91	5.28	16.65	5.18	0.14
Law Enforcement Orientation (Leo)	Conventional and practical values	16.47	3.25	15.90	2.90	-0.18
Vector 1 (v.1)	Extraversion versus introversion	11.22	4.21	10.30	4.00	-0.22
Vector 2 (v.2)	Rule-following versus rule-questioning	13.23	3.44	12.30	3.10	-0.28
Vector 3 (v.3)	Fulfillment of personal potential	13.84	5.64	14.95	4.75	0.20

Note: Sensing, n = 64; Intuition, n = 20.

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

		Think	ing	Feeli	ng	
CPI 260° scale	CPI 260° scale description	М	SD	М	SD	Cohen's d
Dominance (Do)	Prosocial interpersonal power and influence	18.61	6.51	16.68	5.96	-0.31
Capacity for Status (Cs)	Ambition for challenge and social status	13.13	3.37	12.61	3.68	-0.15
Sociability (Sy)	Social participation	13.13	4.49	14.13	4.23	0.23
Social Presence (Sp)	Poise and comfort with attention and recognition	16.57	3.54	16.97	3.88	0.11
Self-acceptance (Sa)	Sense of personal worth and self-confidence	11.98	3.70	11.63	3.39	-0.10
Independence (In)	Self-sufficiency and self-directedness	13.70	3.89	12.87	4.09	-0.21
Empathy (Em)	Capacity to understand and respond to others' needs	13.15	3.23	12.61	3.33	-0.17
Responsibility (Re)	Conscientiousness and follow-through	15.22	3.47	14.71	3.55	-0.14
Social Conformity (So)	Conformance with social norms and customs	19.61	4.64	18.24	4.70	-0.29
Self-control (Sc)	Cautiousness and self-regulation	15.80	5.15	15.08	4.66	-0.15
Good Impression (Gi)	Tact and positive self-presentation	14.96	4.74	14.11	4.43	-0.18
Communality (Cm)	Conventional behavior and attitudes	17.89	3.02	17.82	2.72	-0.03
Well-being (Wb)	Overall sense of health and optimism	13.48	3.97	12.45	4.08	-0.26
Tolerance (To)	Open-mindedness and respect for others	10.59	4.11	10.11	3.95	-0.12
Achievement via Conformance (Ac)	Motivation within organized settings	19.54	4.70	18.82	4.72	-0.15
Achievement via Independence (Ai)	Motivation within unstructured settings	13.83	3.85	12.34	3.20	-0.42
Conceptual Fluency (Cf)	Comfort with intellectual and conceptual matters	17.76	4.50	17.50	4.25	-0.06
Insightfulness (Is)	Analytical insight into the motivations of others	12.24	3.18	11.82	2.94	-0.14
Flexibility (Fx)	Adaptability and comfort with change	7.96	2.65	8.58	3.93	0.19
Sensitivity (Sn)	Tough- versus tender-mindedness	12.89	3.09	14.47	3.14	0.51
Managerial Potential (Mp)	Inclination for supervisory responsibilities	13.43	3.80	11.89	3.90	-0.40
Work Orientation (Wo)	Sense of dedication to work	15.17	4.19	14.05	4.29	-0.26
Creative Temperament (Ct)	Individualization and capacity for innovativeness	13.76	3.39	13.68	3.34	-0.02
Leadership (Lp)	Initiative and effectiveness in leading others	23.07	6.42	20.95	6.76	-0.32
Amicability (Ami)	Cooperation and friendliness	16.46	5.51	15.63	4.91	-0.16
Law Enforcement Orientation (Leo)	Conventional and practical values	17.11	3.15	15.39	2.95	-0.56
Vector 1 (v.1)	Extraversion versus introversion	10.39	4.33	11.74	3.87	0.33
Vector 2 (v.2)	Rule-following versus rule-questioning	13.63	3.18	12.26	3.47	-0.41
Vector 3 (v.3)	Fulfillment of personal potential	14.74	5.68	13.34	5.10	-0.26

Note: Thinking, n = 46; Feeling, n = 38.

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

		Judg	ing	Percei	ving	
CPI 260° scale	CPI 260° scale description	М	SD	М	SD	Cohen's d
Dominance (Do)	Prosocial interpersonal power and influence	17.64	6.48	17.83	6.20	0.03
Capacity for Status (Cs)	Ambition for challenge and social status	12.88	3.22	12.90	3.80	0.01
Sociability (Sy)	Social participation	13.74	4.71	13.43	4.07	-0.07
Social Presence (Sp)	Poise and comfort with attention and recognition	16.31	3.71	17.19	3.64	0.24
Self-acceptance (Sa)	Sense of personal worth and self-confidence	11.43	3.57	12.21	3.52	0.22
Independence (In)	Self-sufficiency and self-directedness	13.57	3.98	13.07	4.01	-0.13
Empathy (Em)	Capacity to understand and respond to others' needs	12.69	2.96	13.12	3.58	0.13
Responsibility (Re)	Conscientiousness and follow-through	15.69	3.43	14.29	3.45	-0.41
Social Conformity (So)	Conformance with social norms and customs	20.33	4.43	17.64	4.61	-0.60
Self-control (Sc)	Cautiousness and self-regulation	17.29	4.51	13.67	4.69	-0.79
Good Impression (Gi)	Tact and positive self-presentation	16.26	4.59	12.88	3.98	-0.79
Communality (Cm)	Conventional behavior and attitudes	18.29	2.48	17.43	3.19	-0.30
Well-being (Wb)	Overall sense of health and optimism	14.02	3.76	12.00	4.08	-0.52
Tolerance (To)	Open-mindedness and respect for others	11.26	4.01	9.48	3.87	-0.45
Achievement via Conformance (Ac)	Motivation within organized settings	20.57	4.21	17.86	4.81	-0.60
Achievement via Independence (Ai)	Motivation within unstructured settings	13.90	3.36	12.40	3.76	-0.42
Conceptual Fluency (Cf)	Comfort with intellectual and conceptual matters	18.81	4.23	16.48	4.23	-0.55
Insightfulness (Is)	Analytical insight into the motivations of others	12.29	2.89	11.81	3.25	-0.15
Flexibility (Fx)	Adaptability and comfort with change	7.36	3.07	9.12	3.29	0.55
Sensitivity (Sn)	Tough- versus tender-mindedness	13.52	3.05	13.69	3.37	0.05
Managerial Potential (Mp)	Inclination for supervisory responsibilities	13.50	3.98	11.98	3.72	-0.40
Work Orientation (Wo)	Sense of dedication to work	15.98	4.09	13.36	4.04	-0.64
Creative Temperament (Ct)	Individualization and capacity for innovativeness	13.45	3.26	14.00	3.44	0.16
Leadership (Lp)	Initiative and effectiveness in leading others	23.02	6.81	21.19	6.39	-0.28
Amicability (Ami)	Cooperation and friendliness	17.69	5.05	14.48	4.96	-0.64
Law Enforcement Orientation (Leo)	Conventional and practical values	16.86	2.71	15.81	3.51	-0.33
Vector 1 (v.1)	Extraversion versus introversion	12.02	3.82	9.98	4.27	-0.51
Vector 2 (v.2)	Rule-following versus rule-questioning	14.29	3.00	11.74	3.25	-0.81
Vector 3 (v.3)	Fulfillment of personal potential	15.12	5.46	13.10	5.29	-0.38

Note: Judging, n = 42; Perceiving, n = 42.

MBTI[®] GLOBAL STEP II[®] ASSESSMENT RESULTS FOR THE SPANISH 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 | Relationships between Global Step II", Form Q, and European Step II" facet results: Spanish sample

	Correlation betw	een continuous scores
Global Step II [®] facet	Global Step II [®] and Form Q facet results	Global Step II [®] and European Step II [®] facet results
E–I facets		
Initiating-Receiving	.97	.94
Expressive-Contained	.98	.93
Gregarious-Intimate	.97	.99
Active-Reflective	.84	.87
Enthusiastic-Quiet	.98	.96
S–N facets		
Concrete-Abstract	.93	.92
Realistic-Imaginative	.99	.99
Practical-Conceptual	.84	.84
Experiential-Theoretica	.91	.96
Traditional-Original	.94	.94
T–F facets		
Logical-Empathetic	.93	.94
Reasonable-	.91	.95
Compassionate		
Questioning-	.43	.57
Accommodating		
Critical–Accepting	.77	.79
Tough-Tender	.97	.95
J–P facets		
Systematic-Casual	.92	.96
Planful–Open-Ended	.97	.98
Early Starting– Pressure-Prompted	.91	.91
Scheduled-	.91	.89
Spontaneous	.91	.05
Methodical-Emergent	.95	.88

Note: N = 564.

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 Spanish sample.

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 European Spanish translation of the MBTI Global Step II assessment, including reliability and validity. For full reliability and validity information for the global sample, refer to the *MBTI*[®] *Manual for the Global Step I*[®] *and Step II*[®] *Assessments* (Myers et al., 2018).

RELIABILITY

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

VALIDITY

Reported here as evidence of the validity of the Spanish 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 on 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 out-of-preference scores on three or more facets within any one preference pair. The percentage of outof-preference facet scores for each preference pair in the Spanish sample is shown in table 24.

Table 22 | Intercorrelations of Global Step II" facets: Spanish 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	.60	_																		
3. Gregarious-Intimate	.61	.50	_																	
4. Active-Reflective	.66	.49	.50	_																
5. Enthusiastic-Quiet	.61	.52	.57	.54	_															
S-N facets																				
6. Concrete-Abstract	13	06	15	05	20	_														
7. Realistic-Imaginative	18	11	16	09	30	.66	_													
8. Practical-Conceptual	16	04	12	06	25	.58	.65	_												
9. Experiential-Theoretical	.06	.00	.01	.05	.09	.31	.21	.16	_											
10. Traditional–Original	26	09	22	17	37	.55	.57	.62	.10	—										
T–F facets																				
11. Logical-Empathetic	20	30	20	13	27	.33	.35	.23	01	.16	_									
12. Reasonable-Compassionate	12	17	11	05	12	.26	.28	.16	.09	.06	.68	_								
13. Questioning-Accommodating	.02	08	04	.02	02	.09	.12	.01	.03	09	.39	.39	_							
14. Critical-Accepting	19	19	16	11	25	.20	.21	.15	10	.12	.48	.40	.63	_						
15. Tough-Tender	05	17	05	.01	05	.23	.20	.13	.01	.06	.57	.55	.62	.59	_					
J-P facets																				
16. Systematic-Casual	21	14	20	13	30	.43	.46	.36	.08	.52	.31	.24	.12	.23	.15	_				
17. Planful–Open-Ended	15	10	13	10	16	.29	.21	.22	.05	.35	.09	.09	.04	.12	.05	.61	_			
18. Early Starting-Pressure-Prompted	.08	.03	02	.00	04	.22	.22	.12	.16	.16	.07	.12	01	07	04	.42	.41	_		
19. Scheduled-Spontaneous	09	06	13	07	16	.33	.31	.23	.09	.38	.17	.15	.03	.07	01	.68	.68	.49	_	
20. Methodical-Emergent	06	03	06	04	06	.13	.13	.08	.10	.15	.03	.09	.01	02	.01	.49	.55	.51	.60	_

Note: N = 564.

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

Global Step II [°] facet	Cronbach's alpha	Test-retest correlation
E–I facets		
Initiating-Receiving	.74	.76
Expressive-Contained	.70	.66
Gregarious-Intimate	.61	.73
Active-Reflective	.62	.69
Enthusiastic-Quiet	.63	.77
S–N facets		
Concrete-Abstract	.64	.79
Realistic-Imaginative	.74	.71
Practical-Conceptual	.65	.66
Experiential-Theoretical	.48	.39
Traditional-Original	.69	.63
T–F facets		
Logical-Empathetic	.79	.70
Reasonable-Compassionate	.68	.66
Questioning-Accommodating	.44	.66
Critical-Accepting	.43	.60
Tough-Tender	.66	.67
J–P facets		
Systematic-Casual	.68	.66
Planful-Open-Ended	.79	.78
Early Starting-Pressure-Prompted	.55	.58
Scheduled-Spontaneous	.70	.72
Methodical-Emergent	.60	.52

Note: N = 564; test-retest, n = 115.

Table 24 | Percentage of reported out-of-
preference Global Step II" facet scores:Spanish sample

Preference	Numl	ber of ou	t-of-pref	erence fa	cet score	es (%)
pair	0	1	2	3	4	5
E–I	66	28	6	<1	0	0
S-N	63	30	6	<1	0	0
T-F	71	21	7	<1	0	0
J-P	26	10	2	<1	0	0

Note: N = 564.

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 in relation to the Step I scales" (Quenk, Hammer, & Majors,

Table 25 | Correlations between Global Step II*facets and preference pairs: Spanish sample

		Prefere	nce pair	
Global Step II [®] facet	E-I	S-N	T-F	J-P
E–I facets				
Initiating-Receiving	.87	19	16	12
Expressive-Contained	.73	08	25	08
Gregarious-Intimate	.74	19	15	14
Active-Reflective	.78	09	07	08
Enthusiastic-Quiet	.78	29	18	19
S–N facets				
Concrete-Abstract	15	.83	.32	.36
Realistic-Imaginative	21	.85	.32	.34
Practical-Conceptual	17	.78	.20	.27
Experiential-Theoretical	.06	.40	.03	.08
Traditional–Original	28	.74	.13	.42
T–F facets				
Logical-Empathetic	27	.31	.88	.20
Reasonable-	14	.25	.83	.16
Compassionate	01	07	FO	0.9
Questioning – Accommodating	01	.07	.59	.08
Critical-Accepting	23	.17	.63	.14
Tough-Tender	08	.18	.79	.07
J–P facets				
Systematic–Casual	23	.51	.30	.79
Planful-Open-Ended	15	.30	.11	.84
Early Starting-	.05	.25	.06	.57
Pressure-Prompted				
Scheduled-Spontaneous	12	.36	.14	.91
Methodical-Emergent	06	.18	.04	.67

Note: N = 564.

2001, p. 104). The Spanish 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 European Spanish 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 the MBTI Global Step II assessment and the ACL are

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

							ACL sca	le					
Global Step II ⁻ facet scale	Communality	Dominance	Endurance	Order	Nurturance	Affiliation	Exhibition	Change	Deference	Self-Control	Self-Confidence	Personal Adjustment	Creative Personality
E–I facet scales													
Initiating-Receiving	12	50	06	04	27	28	54	31	.27	.33	55	29	34
Expressive-Contained	03	39	.02	.00	23	21	54	32	.20	.29	47	20	23
Gregarious–Intimate	03	37	.06	.10	09	18	58	35	.33	.41	46	12	19
Active-Reflective	09	40	.02	.01	14	18	50	23	.33	.31	45	23	27
Enthusiastic-Quiet	10	43	01	.01	16	25	60	42	.37	.45	53	17	30
S–N facet scales													
Concrete-Abstract	.11	.09	.01	05	.10	.14	.18	.41	17	28	.15	.04	.29
Realistic-Imaginative	.06	.25	03	11	.08	.16	.39	.44	29	51	.35	.10	.47
Practical-Conceptual	.18	.37	.10	.03	.05	.25	.42	.45	39	53	.41	.12	.48
Experiential-Theoretical	07	09	07	04	05	06	11	06	.00	.00	13	04	.11
Traditional-Original	.23	.36	.07	01	.10	.27	.52	.59	39	51	.45	.10	.47
T–F facet scales													
Logical-Empathetic	11	20	14	18	.16	03	02	.15	.05	06	04	07	05
Reasonable-Compassionate	11	24	05	06	.14	06	17	05	.21	.15	15	.02	12
Questioning–Accommodating	.03	35	12	15	.13	01	27	.02	.28	.18	16	.02	13
Critical-Accepting	.12	16	06	11	.27	.18	.01	.26	.09	.00	.06	.13	.05
Tough-Tender	05	44	08	16	.22	05	27	01	.29	.20	22	05	19
J–P facet scales													
Systematic-Casual	.10	.24	07	13	.24	.26	.41	.53	22	36	.36	.15	.28
Planful-Open-Ended	.08	.15	18	27	.11	.03	.26	.41	10	22	.19	.03	.15
Early Starting-Pressure-Prompted	.00	.05	23	23	05	04	.24	.34	19	26	.09	.05	.31
Scheduled-Spontaneous	.07	.27	16	22	.09	.12	.35	.53	30	35	.30	.11	.25
Methodical-Emergent	06	.04	20	25	.03	.02	.20	.25	08	13	.08	02	.04

Note: n = 81.

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 Spanish sample are shown in table 27. The correlations reported here are similar to those found in the *MBTI® Step II® Manual* for the CPI® 434 assessment (Quenk et al., 2001), 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 practitioners give feedback to respondents, the most important verification issue is the accuracy with which the scores reflect respondents' 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.

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 Spanish 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

									·					CPI	260° :	scale									· · · ·				
Global Step II [®] facet scale	Do	Cs	Sy	Sp	Sa	In	Em	Re	So	Sc	Gi	Cm	Wb	То	Ac	Ai	Cf	ls	Fx	Sn	Мр	Wo	Ct	Lp	Ami	Leo	v.1	v.2	v.3
E–I facet scales																													
Initiating-Receiving	55	40	55	28	52	42	39	20	07	04	16	04	23	15	25	05	23	.01	.03	.31	27	10	38	51	09	27	.26	15	08
Expressive-Contained	45	24	47	29	40	38	16	16	01	.05	05	.01	17	03	17	.18	15	.01	.12	.09	12	05	18	42	01	13	.25	24	.09
Gregarious-Intimate	37	25	44	17	38	25	.00	07	01	01	10	.06	11	03	16	.06	07	01	06	.00	06	.01 ·	20	36	.01	08	.16	12	01
Active-Reflective	52	35	53	31	53	28	29	03	.07	.24	.05	.09	09	.03	16	.07	15	.11	02	.25	16	.03	28	40	.09	24	.47	10	.09
Enthusiastic-Quiet	52	41	41	31	55	38	32	05	.09	.14	01	.13	10	11	14	.03	13	08	13	.15	20	01	45	45	.00	07	.41	.00	09
S–N facet scales																													
Concrete-Abstract	.02	.23	.15	.22	.17	.08	.19	09	18	23	16	12	16	01	06	.01	.00	.04	.13	.11	11	10	.28	.05	13	21	10	15	05
Realistic-Imaginative	.07	.23	.06	.30	.06	.02	.22	07	12	28	22	.02	13	.05	04	05	06	.10	.25	.09	06	08	.23	.06	09	14	22	18	06
Practical-Conceptual	.16	.30	.17	.33	.21	.23	.27	.09	.06	11	04	05	.03	.14	.04	.17	.17	.26	.20	.09	.10	.05	.37	.19	.05	11	10	19	.09
Experiential-Theoretical	.05	.07	.06	05	.14	.00	.04	09	20	15	12	19	20	11	09	12	08	06	13	.02	08	19	05	01	19	07	18	.00	13
Traditional-Original	.24	.30	.23	.31	.29	.28	.29	.00	04	17	08	.01	.03	.11	.06	.18	.20	.28	.23 -	06	.10	02	.48	.26	.00	04	17	21	.08
T–F facet scales																													
Logical-Empathetic	19	22	.01	.02	21	15	12	21	21	16	15	.04	15	16	18	41	18	24	.01	.24	25	20	20	24	15	22	.11	19	24
Reasonable – Compassionate	16	12	.11	.05	15	16	12	04	09	05	07	03	13	07	15	26	04	21	.06	.26	18	17	09	22	09	18	.14 ·	09	15
Questioning- Accommodating	41	30	15	19	30	33	23	14	12	.06	05	.01	16	11	10	25	23	20	.09	.40	33	08	18	33	.05	24	.34	17	15
Critical-Accepting	13	08	.08	.02	07	08	06	07	12	.02	02	.02	06	09	04	22	10	11	.05	.27	13	08	12	09	.03	10	.16	16	12
Tough-Tender	12	10	.10	03	09	10	.00	.02	08	.02	.01	.01	12	.00	01	20	03	08	02	.30	14	07 ·	06	11	02	15	.17	10	10
J–P facet scales																													
Systematic–Casual	.10	.14	.14	.30	.19	.07	.26	17	17	32	26	08	11	10	21	20	12	08	.30	.05	09	17	.30	.00	15	15	22	34	09
Planful-Open-Ended	.11	.06	.12	.21	.24	.13	.09	06	15	25	24	02	08	16	22	11	10	.00	.19 -	06	14	20	.23	.01	16	01	14	32	12
Early Starting– Pressure-Prompted	16	07	11	.13	.02	22	02	33	32	43	44	28	31	31	46	24	37	15	.26	.10	36	35	.07	31	34	27	17	43	28
Scheduled-Spontaneous	01	02	.01	.17	.16	09	.05	28	39	35	36	21	27	23	42	23	23	18	.25	.01	21	34	.19	17	24	19	18	45	17
Methodical-Emergent	.15	.12	.12	.21												07											20		

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

Note: n = 84.

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

	In-pre	ference	Mid	zone	Out-of-preference		
Global Step II [®] facet	%	Rank	%	Rank	%	Rank	
E–I facets							
Initiating-Receiving	53.19	13	43.97	4	2.84	19	
Expressive-Contained	50.18	17	40.78	5	9.04	7	
Gregarious-Intimate	56.38	7	32.62	17	10.99	5	
Active-Reflective	56.03	9	35.28	12	8.69	8	
Enthusiastic-Quiet	54.26	11	37.23	10	8.51	9	
S–N facets							
Concrete-Abstract	59.22	4	37.77	7	3.01	18	
Realistic-Imaginative	59.93	3	34.04	14	6.03	15	
Practical-Conceptual	59.22	4	30.14	18	10.64	6	
Experiential-Theoretical	49.82	18	33.33	15	16.84	2	
Traditional–Original	46.81	19	46.63	2	6.56	14	
T–F facets							
Logical–Empathetic	61.52	2	34.93	13	3.55	16	
Reasonable-Compassionate	56.38	7	36.88	11	6.74	13	
Questioning-Accommodating	39.72	20	52.48	1	7.80	10	
Critical-Accepting	50.71	15	37.77	7	11.52	4	
Tough-Tender	55.67	10	37.41	9	6.91	12	
J–P facets							
Systematic-Casual	54.08	12	38.65	6	7.27	11	
Planful–Open-Ended	63.65	1	33.16	16	3.19	17	
Early Starting-Pressure-Prompted	50.53	16	24.65	20	24.82	1	
Scheduled-Spontaneous	52.66	14	46.10	3	1.24	20	
Methodical-Emergent	57.62	6	25.71	19	16.67	3	

Note: N = 564.

the frequency with which facet scores are likely to be out-of-preference. Here, the facet with the highest percentage of out-of-preference scores is Early Starting– Pressure-Prompted at 24.82%, followed by Experiential– Theoretical at 16.84%. The Scheduled–Spontaneous facet (1.24%) and the Initiating–Receiving facet (2.84%) appear least likely to elicit out-of-preference responses.

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

CONCLUSION

Initial analyses of the European Spanish translations of the MBTI Global Step I and Step II assessments demonstrate that they each have good internal consistency and test-retest reliabilities that 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-of-preference facet scores is also presented. While more research should be conducted, all these analyses show that the Spanish translations of the MBTI Global Step I and Step II assessments have adequate reliability and validity and are appropriate for use with individuals in Spain who read and understand European Spanish.

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

		sample 564)		en 264)	Wo r (<i>n</i> =	men 300)	Gender difference
Global Step II [®] facet	М	SD	М	SD	М	SD	Cohen's d
E–I facets							
Initiating-Receiving	-0.06	0.76	-0.03	0.75	-0.09	0.76	0.08
Expressive-Contained	-0.03	0.81	0.01	0.75	-0.08	0.86	0.11
Gregarious-Intimate	-0.23	0.76	-0.19	0.79	-0.27	0.73	0.10
Active-Reflective	-0.16	0.81	-0.12	0.80	-0.19	0.81	0.08
Enthusiastic-Quiet	-0.07	0.78	0.03	0.80	-0.16	0.75	0.25
S–N facets							
Concrete-Abstract	-0.43	0.76	-0.49	0.76	-0.38	0.77	-0.15
Realistic-Imaginative	-0.30	0.85	-0.35	0.85	-0.26	0.85	-0.10
Practical-Conceptual	-0.21	0.80	-0.27	0.83	-0.16	0.78	-0.14
Experiential-Theoretical	-0.34	0.64	-0.28	0.69	-0.39	0.59	0.17
Traditional-Original	-0.22	0.77	-0.25	0.76	-0.20	0.78	-0.07
T–F facets							
Logical–Empathetic	-0.02	0.86	-0.32	0.82	0.23	0.81	-0.68
Reasonable-Compassionate	-0.35	0.75	-0.49	0.73	-0.22	0.74	-0.36
Questioning-Accommodating	-0.05	0.67	-0.14	0.67	0.03	0.66	-0.25
Critical-Accepting	-0.14	0.68	-0.32	0.67	0.02	0.65	-0.51
Tough-Tender	-0.09	0.79	-0.26	0.77	0.07	0.77	-0.42
J–P facets							
Systematic-Casual	-0.10	0.77	-0.22	0.75	0.01	0.78	-0.30
Planful-Open-Ended	0.14	0.87	0.08	0.85	0.18	0.88	-0.12
Early Starting-Pressure-Prompted	-0.06	0.71	-0.03	0.74	-0.08	0.69	0.07
Scheduled-Spontaneous	-0.01	0.76	-0.04	0.78	0.01	0.74	-0.07
Methodical-Emergent	0.01	0.76	0.09	0.77	-0.06	0.75	0.20

Note: For information on Cohen's d, see note 4, below.

NOTES

- 1. Originally, samples from India (North American English) and Saudi Arabia (Arabic) were collected, but these were later dropped from the global sample due to sample composition and psychometric concerns.
- 2. 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.
- 3. Correlation coefficients 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, $r^2 = .30$ is medium, and $r^2 = .50$ is large (Cohen, 1988, 1992).
- 4. 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 = .20 be considered small, d = .50 be considered medium, and d = .80 be considered large. In psychological research, small to medium effect sizes are typical.

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