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Character strengths in Spain: Validation of the Values in Action Inventory of Strengths (VIA-IS) in a Spanish sample

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ARTICLE INFORMATION

ABSTRACT

The Values in Action Inventory of Strengths (VIA-IS; Peterson, Park, & Seligman, 2005) is a self-report questionnaire that measures 24 widely valued strengths of character. In this paper we present the psychometric properties of the Spanish translation in a sample of 1,060 adults. We analyzed its associations with life satisfaction and positive and negative affect, and examined its factorial structure. Data on the prevalence and demographic correlates of the character strengths are described. The results indicated that the 24 subscales had satisfactory reliability (mean α = .81, mean corrected item-total correlations = .50). Correlations of the VIA-IS subscales with life satisfaction and affect replicated findings from earlier studies and supported the construct validity of the scale. Factor analysis justified the five-dimensions of the original instrument.

Fortalezas personales en España: Validación del Cuestionario VIA-IS en una muestra española

RESUMEN

El Cuestionario VIA de Fortalezas Personales (VIA-IS; Peterson, Park y Seligman, 2005) es un autoinforme que mide 24 fortalezas del carácter ampliamente valoradas. Este artículo presenta las propiedades psicométricas de la versión española del VIA-IS en una muestra de 1.060 adultos. Se analizan las relaciones con satisfacción vital y afecto positivo y negativo y se examina su estructura factorial. Se describen datos sobre prevalencia y correlatos demográficos de las fortalezas personales. Los resultados indicaron que las 24 subescalas pueden considerarse fiables (media α = .81, media de las correlaciones ítem-total corregidas = .50). Las correlaciones de las subescalas con la satisfacción vital y el afecto reflejaron resultados semejantes a los de estudios anteriores y apoyaron la validez de constructo de la escala. El análisis factorial confirmó las 5 dimensiones del instrumento original.

The aim of *positive psychology* is 'to catalyze a change in the focus of psychology from preoccupation only with repairing the worst things in life to also building positive qualities' (Seligman & Csikszentmihalyi, 2000, p. 5). The study of human strengths and virtues is one of the main topics in this field of psychology. Character strengths have been defined as 'positive traits reflected in thoughts, feelings, and behaviors' (Park, Peterson, & Seligman, 2004, p. 603). Although similar to personality traits, character strengths are thought to be different because of the moral and cultural value placed on them (Peterson & Seligman, 2004).

The study of virtues and human strengths led Peterson and Seligman (2004) to develop a classification of positive traits of character called *Values in Action* (VIA). The authors proposed ten criteria that a positive trait had to fulfill to be included in the classification as strength of character: (1) it is fulfilling; (2) it is morally valued in its own right; (3) its display does not diminish others; (4) it has obvious antonyms that are 'negative'; (5) it should be trait-like; (6) it is distinct from other character strengths; (7) it is embodied in consensual paragons; (8) it is precociously shown by some children or youths; (9) it is missing altogether in some individuals; and (10) it is the deliberate target of societal practices and rituals that try to cultivate it (Park, Peterson, & Seligman, 2006; Seligman, Steen, Park, & Peterson, 2005).

Finally, the classification included 24 ubiquitously-recognized character strengths, organized under six universal or core virtues:

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(a) wisdom and knowledge (including the strengths of creativity, curiosity, open-mindedness, love of learning, and perspective); (b) courage (including bravery, persistence, honesty, and zest); (c) humanity (including love, kindness, and social intelligence); (d) justice (including teamwork, fairness, and leadership); (e) temperance (including forgiveness, modesty, prudence, and self-regulation); and (f) transcendence (including appreciation of beauty and excellence, gratitude, hope, humor, and spirituality). Strengths were assigned to virtue categories on theoretical and not empirical basis.

From this classification system, in order to measure the character strengths, a self-report 240-item questionnaire was created: the *Values in Action Inventory of Strengths* (VIA-IS; Peterson & Seligman, 2004). Preliminary investigations on the VIA-IS demonstrated acceptable reliability and promising validity (Park et al., 2004; Park et al., 2006; Peterson & Seligman, 2004): all VIA-IS subscales had satisfactory internal consistency measured by Cronbach's α (> .70) and substantial test-retest correlations over a 4-month period (> .70).

Demographic correlates of the VIA-IS

There are demographic correlates of specific character strengths, usually gender, age, and educational level. Park et al. (2006) compared the VIA-IS scores in fifty-four nations and all fifty states of the United States, and investigated the relative prevalence of character strengths. The authors found that the rank order of the strengths was similar in all the countries studied. Kindness, fairness, honesty, gratitude, and open-mindedness were the most commonly endorsed strengths in human beings. Prudence, modesty, and self-regulation were the lowest ranked strengths.

Regarding gender differences, Peterson and Seligman (2004) and Park et al. (2004) reported that females scored higher than males on humanity strengths like love and kindness. Linley et al. (2007) presented data on the character strengths of a UK sample of 17,056 respondents: women typically scored higher than men on almost all strengths, with the exception of creativity. In a Swiss sample of German speakers, Ruch et al. (2010) reported higher scores for women on love, kindness, appreciation of beauty and excellence, and gratitude, and higher ranks for men on creativity, open-mindedness, perspective, and leadership. Littman-Ovadia and Lavy (2012) explored gender differences among Israeli adults: women scored higher than men on love, appreciation of beauty and excellence, and gratitude, whereas men scored higher on creativity. Karris and Craighead (2012) found significant differences for 11 of the 24 character strengths: females reported more kindness, love, gratitude, forgiveness, appreciation of beauty and excellence, prudence, fairness, and leadership, while males reported more creativity, bravery, and self-regulation. These results are in agreement with those of Shimai, Otake, Park, Peterson, and Seligman (2006), who argued that gender differences in character strengths were similar in American and Japanese cultures: females had higher ranks than males for the strengths of kindness, love, gratitude, teamwork, and appreciation of beauty and excellence, whereas males were more likely to report open-mindedness, perspective, creativity, bravery, and self-regulation. These findings are consistent with those of Furnham and Lester (2012), who used a short questionnaire based on the VIA-IS: women rated themselves statistically higher on kindness, love, gratitude, and zest, and men rated themselves higher on open-mindedness and bravery.

Except for gender, Park et al. (2004) did not find any relationship between demographic variables and strengths. However, Linley et al. (2007) found small but significant positive associations with age. They reported that the strongest correlations with age were found with the strengths of curiosity, love of learning, fairness, self-regulation, and forgiveness. Ruch et al. (2010) found that older age correlated with higher scores for the temperance strengths, like self-regulation, modesty, prudence, and forgiveness. Peterson and Seligman (2004) reported that younger adults scored somewhat higher than older adults on the subscale for humor.

Ruch et al. (2010) found significant correlations between educational level and certain strengths. Specifically, the results of their study showed that participants with more education had higher scores for the strengths related to wisdom and knowledge such as love of learning, open-mindedness, and curiosity.

Character strengths and well-being

According to Aristotle, the positive psychology assumes that we can achieve the 'good life' through the habituation and exercising of good character (Seligman & Csikszentmihalyi, 2000). The enactment and use of character strengths should be fulfilling (Peterson & Seligman, 2004; Seligman, 2002; Seligman et al., 2005), and therefore it should contribute to an individual's well-being. In fact, evidence concerning the positive outcomes of the character strengths is accumulating (Park & Peterson, 2008).

The field of subjective well-being (SWB) includes a wide range of aspects, from momentary moods to global judgments of one's life (Kim-Prieto, Diener, Tamir, Scollon, & Diener, 2005). Two important components of SWB are life satisfaction (a cognitive component which refers to evaluations of one's satisfaction with his or her life) and affect balance (an affective component which refers to the positive and negative affect a person experiences) (Diener, 2000; Ryan & Deci, 2001).

Park et al. (2004) investigated the relationships between strengths and life satisfaction in a sample composed mainly of U.S. citizens. They argued that all strengths contribute to fulfillment and well-being, though certain positive traits are more robustly associated with well-being than others. Specifically, hope, zest, gratitude, love, and curiosity were the strengths consistently and robustly associated with higher satisfaction with life. These correlation coefficients ranged from .59 (hope) through .34 (curiosity). Similar findings were also found in samples from Japan (Shimai et al., 2006), Israel (Littman-Ovadia & Lavy, 2012), Slovenia (Gradisek, 2012), and Switzerland (Buschor, Proyer, & Ruch, 2013; Peterson, Ruch, Beermann, Park, & Seligman, 2007; Ruch et al., 2010). In contrast, previous research (e.g., Littman-Ovadia & Lavy, 2012; Park et al, 2004; Ruch et al., 2010) shows that modesty, fairness, and the intellectual strengths of appreciation of beauty and excellence and love of learning were only weakly related to life satisfaction. These correlation sizes were generally small in range (r's < .20, p < .002).

With regard to the relationships of character strengths with affective components of well-being, Littman-Ovadia and Lavy (2012) found that all strengths except modesty, forgiveness, and spirituality were significantly (p < .001) and directly related to positive affect. These correlations ranged from .26 (prudence) through .57 (zest). Hope, curiosity, zest, love of learning, and perspective were the five strengths most highly associated with positive affect. Only strengths of hope, curiosity, zest, love, and self-regulation were significantly (p < .001) and negatively related to negative affect, ranging from -.26 (love) through -.34 (hope). These findings are consistent with those of Güsewell and Ruch (2012), who found that the correlations between positive emotions and strengths were positive.

Internal structure of the VIA-IS

Several studies have reported on the factor structure of the VIA-IS (see Brdar & Kashdan, 2010; Littman-Ovadia & Lavy, 2012; Macdonald, Bore, & Munro, 2008; McGrath, in press; Peterson, Park, Pole, D'Andrea, & Seligman, 2008; Ruch et al., 2010; Shryack, Steger, Krueger, & Kallie, 2010; Singh & Choubisa, 2010). Most of these findings have revealed that four- or five-dimensional models best fit the data.

Peterson and Seligman (2004) identified five factors derived from exploratory factor analyses of subscale scores. These factors were labeled as follows: (1) strengths of restraint (fairness, modesty, forgiveness, prudence); (2) intellectual strengths (e.g., creativity, curiosity, love of learning, appreciation of beauty, and excellence); (3) interpersonal strengths (e.g., kindness, love, leadership, teamwork, humor); (4) emotional strengths (e.g., bravery, hope, self-regulation, zest); and (5) theological strengths (e.g., gratitude, spirituality). The authors reported that these factors were not identical to the VIA classification, but they were similar. Specifically, the first factor (strengths of restraint) corresponded to strengths of temperance; the second factor (intellectual strengths) corresponded to strengths included in the virtue of wisdom and knowledge; the third factor (interpersonal strengths) corresponded to the strengths assigned to the virtues of humanity and justice; the fourth factor (emotional strengths) corresponded to the strengths included in the virtue of courage; and the fifth factor (theological strengths) corresponded to the strengths involved in the virtue of transcendence.

The VIA classification includes virtues that were found to be ubiquitous across time and cultures (Biswas-Diener, 2006; Dahlsgaard, Peterson, & Seligman, 2005; Peterson & Seligman, 2004). It implies that the generalizability of the originally propounded classification system is of particular importance. Previous research has demonstrated the cross-cultural generalizability of the VIA-IS to non-US populations; specifically, several studies have examined its psychometric properties, its factorial structure, and the prevalence and demographic correlates of the character strengths measured in Japan (Shimai et al., 2006), United Kingdom (Linley et al., 2007), Switzerland (Peterson et al., 2007; Ruch et al., 2010), Australia (Macdonald et al., 2008), India (Singh & Choubisa, 2010), Croatia (Brdar & Kashdan, 2010), and Israel (Littman-Ovadia & Lavy, 2012).

The present study tries to extend this effort and describes the validation of the Spanish version of the VIA-IS. First, we present the psychometric properties of the VIA-IS subscales and their reliability. Second, we present data on the demographic correlates of the VIA-IS subscales with the goal of examining gender and age differences in strengths, and the relationship between educational level and character strengths. Third, this research also examines its associations with life satisfaction and positive and negative affect in order to contribute to the validity of the Spanish version. Fourth, we analyze the factor structure of the Spanish form of the VIA-IS in an attempt to replicate the model proposed by the authors of the original version (Peterson & Seligman, 2004).

Method

Participants and Procedure

The sample consisted of 1,060 Spanish-speaking adult volunteers (849 women, 211 men) from different places in Spain. Specifically, participants were recruited from five Spanish universities (90%) and the others (10%) were contacts (family, relatives, friends, colleagues, etc.) of these participants. Their mean age was 32.72 years (SD = 10.84, range 18-90 years). Very few participants (0.3%) had not completed primary school education, 0.7% had primary school education, 4% had compulsory secondary education, 36.1% had a high-school education, 14.2% had a postsecondary education, 42.2% had a university degree, and 1.3% had a Ph.D. degree (1.2% of the participants did not provide this information). Most participants (53.2%) were single, 24.4% were married, 14.6% lived together as a couple without being married, 4.8% were separated, and 1.6% were divorced (1% of the participants did not provide this information).

Participants completed a packet of questionnaires including measures of demographic information (i.e., age, gender, marital status), academic information (i.e., educational level), strengths, well-being and other psychological constructs. Before filling out the questionnaires, all participants were given a brief description of the study and were asked to provide informed consent. Participants received individual feedback on their responses to these measures via e-mail.

Instruments

The *Values in Action Inventory of Strengths* (VIA-IS; Peterson et al., 2005) is a 240-item self-report questionnaire where respondents report to what extent these statements apply to themselves. Each of the 24 character strengths in the VIA classification is assessed by 10 items. This questionnaire uses a 5-point Likert scale ranging from 1 (*very much unlike me*) to 5 (*very much like me*). Sample items include 'I find the world a very interesting place' (Curiosity), and 'I never quit a task before it is done' (Persistence). Scores for each of the 24 strengths have a potential range of 10 through 50, with higher scores indicating a greater endorsement of a specific strength. Subscale scores were averaged across items, yielding 24 scores for each participant (i.e., one's ratings of each of the 24 strengths).

In this study, the original inventory of the VIA-IS (freely available on the *Authentic Happiness* website) was translated by using the forward-backward method. First, the English items were translated into Spanish by two bilingual psychologists, who were fluent both in English and Spanish. The translators then met to discuss and agree upon a common version of the questionnaire. A bilingual translator, who had no knowledge of the original version, translated the approved Spanish form back into English. We compared this back translation with the original items. The back-translated items seemed to be essentially the same as the English-language originals. This Spanish form of the VIA-IS employed the same Likert scale as the original inventory and the Spanish-language items were also placed in the same order.

The *Satisfaction with Life Scale* (SWLS; Diener, Emmons, Larsen, & Griffin, 1985) is a 5-item measure of the life satisfaction component of subjective well-being. The respondent is asked to assess his or her satisfaction with life in general (e.g., 'I am satisfied with my life'). The SWLS has been widely used in research and has showed good psychometric properties across different studies (see Pavot & Diener, 2008, for details). Here we applied the Spanish version of the SWLS (Atienza, Pons, Balaguer, & García-Merita, 2000), which showed a good internal consistency (α = .84). Individuals respond to each item on a 5-point scale ranging from 1 (*totally disagree*) to 5 (*totally agree*). Responses are summed to yield an overall score of life satisfaction. A higher score indicates a higher level of life satisfaction. In the current sample, all corrected item-total correlations were > .60 and the scale's reliability was satisfactory (α = .88). These psychometric findings are very similar to those found in other sample of the Spanish population (Vázquez, Duque, & Hervás, 2013), where the internal consistency of the scale was also .88 and all corrected item-total correlations were >. 61. One final score was calculated for each participant by averaging the ratings of the five statements. In the current sample, scores indicated some degree of negative skew (M = 3.56) but had acceptable variability (SD = 0.84). Mean scores and standard deviations were also computed separately by gender: M = 3.58 (SD = 0.82) for females and M = 3.48 (SD = 0.92) for males.

The *Positive and Negative Affect Schedule* (PANAS; Watson, Clark, & Tellegen, 1988) is a 20-item self-report questionnaire which measures the affective component of subjective well-being. The PANAS comprises two subscales, namely Positive Affect (PA) and Negative Affect (NA). Each subscale consists of ten adjectives describing positive affect (e.g., 'enthusiastic', 'inspired', 'active' for PA) and negative affect (e.g., 'upset', 'scared', 'irritable' for NA). Each adjective is rated on a 5-point scale ranging from 1 (*very slightly or not at all*) to 5 (*extremely*) to indicate the extent to which the respondent has felt that way in the past few days. Subscale scores were computed by summing PA items and NA items separately, with

higher scores representing a higher level of the respective dimension. In the current sample, mean scores for the PA subscale were 3.39 (*SD* = 0.78) for females and 3.50 (*SD* = 0.81) for males. Mean scores for the NA subscale were 1.96 (*SD* = 0.74) for females and 1.97 (*SD* = 0.81) for males. Mean scores and standard deviations were also computed for the total sample: *M* = 3.41 (*SD* = 0.78) for the PA subscale and *M* = 1.96 (*SD* = 0.76) for the NA subscale.

The PANAS has been demonstrated to possess adequate psychometric properties in several studies (Crawford & Henry, 2004; Leue & Beauducel, 2011; Terracciano, McCrae, & Costa, 2003; Watson et al., 1988). Its Spanish version was validated by Sandín et al. (1999), who found that the internal consistency coefficients (α) for the two subscales of the questionnaire were .89 (PA) and .91 (NA) for men and .87 (PA) and .89 (NA) for women. In the current sample, both subscales showed high internal consistency (Cronbach's α was .92 for the PA subscale and .89 for the NA subscale).

Results

Character Strengths: Descriptive Statistics and Reliability

Mean scores, standard deviations, skewness, kurtosis, and internal consistencies were computed for each of the 24 VIA-IS subscales (Table 1). Subscale means, on a potential 1-5 scale, ranged from 2.98 (Religiousness) through 4.31 (Kindness), indicating some degree of negative skew. Standard deviations ranged from .47 (Kindness) through .94 (Spirituality).

The internal consistency of the VIA-IS subscales was assessed using Cronbach's α. Table 1 presents the α coefficients for the 24 subscales of the VIA-IS. The results showed all subscales to have good internal consistency, ranging from .73 (Love) through .88 (Persistence), with a mean of .81. Corrected item-subscale correlations were

obtained for each subscale, with a mean of .50. The lowest and highest corrected item-subscale correlations yielded a mean of .34 and .63, respectively.

Regarding relations between character strengths, 275 of the 276 zero-order correlations between the VIA-IS subscales were positive and significant at the .01 level. The one exception was the correlation computed between the strengths of modesty and creativity (*r* = .06), which was found not significant. The highest correlation was found between hope and zest (*r* = .74).

Demographic Correlates of the VIA-IS Subscales

Gender differences on scores for each of the 24 strengths were examined using multivariate analyses of variance (Table 2). Because of the large number of comparisons, we used a conservative *p* level of .05/24 = .002. Four of the 24 strengths showed significant differences between males and females. Women scored higher than men on kindness, love, and gratitude, whereas men rated themselves higher on creativity. However, these effects were small.

In order to compare the relative prevalence of strengths among men and women, we ranked the strengths by mean score from highest to lowest within both subsamples (males and females) and compared the resulting profiles. There was considerable convergence between the signature strengths of both men and women. The rank order correlation between them was r_s = .80, *p* < .001. Fairness, kindness, open-mindedness, curiosity, gratitude, honesty, love, and love of learning were in the top ten signature strengths for both men and women.

Correlations of the VIA-IS subscales with age and educational level are reported in Table 2. Again, we used a conservative *p* level of .002. We found that 10 of 24 strengths were significantly related to age. These correlations were typically small and ranged from .13

Table 1
Descriptive statistics and reliabilities of the VIA-IS subscales

VIA-IS subscales	Descriptive statistics						Reliability
	M	*SD*	S	K	Min	Max	α
Kindness	4.31	0.47	-.69	.28	2.30	5.00	.79
Fairness	4.21	0.48	-.72	.76	1.70	5.00	.77
Love	4.10	0.55	-.66	.11	2.00	5.00	.73
Gratitude	4.05	0.56	-.55	.11	2.00	5.00	.81
Honesty	4.04	0.49	-.34	-.32	2.50	5.00	.75
Open-mindedness	4.01	0.54	-.47	.35	1.60	5.00	.82
Curiosity	3.96	0.56	-.44	.01	2.00	5.00	.81
Love of learning	3.95	0.60	-.37	-.47	1.80	5.00	.81
Appreciation of beauty and excellence	3.90	0.62	-.49	.09	1.50	5.00	.80
Teamwork	3.90	0.55	-.50	.38	1.30	5.00	.77
Hope	3.90	0.66	-.78	.66	1.40	5.00	.83
Leadership	3.88	0.57	-.34	.18	1.50	5.00	.81
Humor	3.83	0.65	-.42	-.09	1.30	5.00	.86
Social intelligence	3.80	0.54	-.48	.27	1.70	5.00	.77
Persistence	3.79	0.69	-.52	-.16	1.50	5.00	.88
Bravery	3.76	0.59	-.44	.08	1.50	5.00	.78
Forgiveness	3.73	0.68	-.58	.25	1.30	5.00	.85
Creativity	3.66	0.70	-.33	-.14	1.10	5.00	.88
Modesty	3.65	0.61	-.35	.17	1.30	5.00	.79
Perspective	3.63	0.56	-.21	.19	1.70	5.00	.80
Prudence	3.60	0.65	-.33	-.15	1.50	5.00	.80
Zest	3.58	0.66	-.52	.40	1.20	5.00	.82
Self-regulation	3.41	0.67	-.11	-.41	1.50	5.00	.76
Spirituality	2.98	0.94	.25	-.79	1.00	5.00	.88

Note. N = 1,060, S = skewness, K = kurtosis, α = Cronbach's α

Table 2
Gender differences on character strengths and correlations of the VIA-IS subscales with age and educational level

Strengths	Men (N = 211)		Women (N = 849)		F(1, 1,058)	Cohen's d	Age (N = 1,048)	Edu (N = 1,047)
	M	SD	M	SD				
Curiosity	4.01	0.53	3.95	0.56	1.78	0.11	0.20*	0.16*
Love of learning	3.91	0.61	3.97	0.60	1.72	0.10	0.28*	0.18*
Open-mindedness	4.06	0.55	3.99	0.54	2.33	0.13	0.08	0.09
Creativity	3.85	0.67	3.61	0.70	20.01*	0.35	0.01	0.04
Social intelligence	3.78	0.56	3.80	0.54	0.29	0.04	-0.02	0.00
Perspective	3.69	0.58	3.61	0.55	3.12	0.14	-0.04	0.06
Bravery	3.80	0.54	3.76	0.60	1.10	0.07	0.07	-0.04
Persistence	3.76	0.66	3.80	0.70	0.42	0.06	0.16*	0.12*
Honesty	3.98	0.47	4.06	0.49	5.01	0.17	0.06	0.03
Kindness	4.19	0.52	4.34	0.46	16.28*	0.31	0.03	0.03
Love	3.97	0.57	4.14	0.53	15.26*	0.31	-0.02	0.06
Teamwork	3.84	0.57	3.91	0.55	3.17	0.12	0.02	0.04
Fairness	4.20	0.49	4.21	0.48	0.27	0.02	0.15*	0.02
Leadership	3.87	0.58	3.88	0.56	0.08	0.02	0.06	0.06
Self-regulation	3.53	0.64	3.38	0.67	8.76	0.23	0.20*	0.10*
Prudence	3.58	0.64	3.60	0.65	0.11	0.03	0.22*	0.06
Appreciation of beauty	3.81	0.69	3.93	0.60	6.78	0.19	0.19*	0.08
Gratitude	3.92	0.62	4.08	0.54	15.16*	0.28	0.14*	0.08
Hope	3.92	0.66	3.89	0.66	0.26	0.05	0.13*	0.03
Spirituality	2.92	0.91	3.00	0.94	1.09	0.09	0.09	0.03
Modesty	3.54	0.62	3.67	0.61	7.72	0.21	0.09	-0.01
Humor	3.87	0.60	3.82	0.66	0.89	0.08	-0.09	-0.05
Zest	3.58	0.70	3.58	0.65	0.02	0.01	0.10	0.07
Forgiveness	3.66	0.74	3.75	0.67	2.79	0.13	0.20*	0.00

Note. The F tests and effect sizes (Cohen's d) are for multivariate analyses of variance with gender as the grouping factor. Edu = educational level (1 = less than compulsory education, 2 = primary school education, 3 = compulsory secondary education, 4 = high-school education or postsecondary education, 5 = university degree, 6 = PhD degree).
*p < .002

(hope) through .28 (love of learning). Four VIA-IS's subscales correlated significantly with educational level. Specifically, love of learning, curiosity, persistence, and self-regulation were the strengths linked to higher educational level. These significant correlations were between .10 (self-regulation) and .18 (love of learning).

Associations of Strengths with Life Satisfaction and Affect

For the purpose of evaluating the convergent validity of the Spanish version of VIA-IS, we examined the correlates of this scale with different indicators of subjective well-being. Table 3 presents the correlations of the VIA-IS's subscales with life satisfaction (measured by SWLS) and positive and negative affect (measured by PANAS). Given the large number of correlations, the *p* value for significance was set to .002 using the Bonferroni correction. We found that all strengths had significant correlations with life satisfaction, ranging from .13 (modesty) through .53 (hope). Specifically, five character strengths (hope, zest, gratitude, love, and curiosity) showed correlation coefficients greater than .40 with satisfaction with life.

Regarding the relation between character strengths and affective components of well-being, we found that all strengths except modesty were significantly and directly related to positive affect. We also found that 21 strengths (all strengths except creativity, appreciation of beauty and excellence, and spirituality) were significantly and negatively related to negative affect. Three strengths in particular were strongly linked to greater positive affect: zest, hope, and curiosity (*r*'s > .50). Hope, zest, and self-regulation yielded the highest (negative) correlations with negative affect (*r*'s > -.26).

Table 3
Correlations of the VIA-IS subscales with SWLS and PANAS

Strengths	SWLS N = 1,057	PA N = 1,057	NA N = 1,057
Curiosity	.41*	.53*	-.23*
Love of learning	.20*	.37*	-.14*
Open-mindedness	.23*	.32*	-.15*
Creativity	.21*	.44*	-.07
Social intelligence	.31*	.40*	-.19*
Perspective	.34*	.43*	-.19*
Bravery	.28*	.39*	-.21*
Persistence	.37*	.41*	-.25*
Honesty	.27*	.28*	-.21*
Kindness	.26*	.28*	-.16*
Love	.42*	.33*	-.18*
Teamwork	.27*	.24*	-.21*
Fairness	.17*	.18*	-.15*
Leadership	.25*	.33*	-.14*
Self-regulation	.31*	.34*	-.26*
Prudence	.20*	.17*	-.19*
Appreciation of beauty	.18*	.34*	-.07
Gratitude	.48*	.40*	-.24*
Hope	.53*	.57*	-.39*
Spirituality	.22*	.21*	-.09
Modesty	.13*	.06	-.12*
Humor	.33*	.36*	-.23*
Zest	.52*	.60*	-.29*
Forgiveness	.26*	.23*	-.24*

Note. SWLS = Satisfaction with Life Scale, PA = Positive Affect, NA = Negative Affect.
*p < .002

Factor Structure of the Spanish Version of the VIA-IS

In order to replicate the original factor structure found by Peterson and Seligman (2004), a Principal Component Analysis (PCA) for the subscales of the VIA-IS was conducted using Varimax rotation. Parallel Analysis (Horn, 1965) was also used for factor retention. Factors generated by the PCA were extracted as valid if eigenvalues were greater than the randomly generated values from Horn's Parallel Analysis. Five components with eigenvalues that exceeded 1.00 provided the best solution (the first ten eigenvalues were 10.36, 2.06, 1.68, 1.23, 1.15, 0.84, 0.80, 0.61, 0.60, and 0.55). Each of these five factors was above the randomly generated criterion eigenvalue from Parallel Analysis. The five-component solution accounted for 68.62% of the variance in the data.

The resulting rotated factor solution is shown in Table 4. The loadings on the main factor for the VIA-IS ranged between .58 and .72 (mean = .67). Based on the criterion proposed by Ruch et al. (2010), we found that four subscales demonstrated double loadings (difference $\leq$ .10 between subscales' loadings). In line with previous reports (Littman-Ovadia & Lavy, 2012; Park & Peterson, 2006; Peterson & Seligman, 2004; Ruch et al., 2010; Shryack et al., 2010), our five factors were labeled: emotional strengths, interpersonal strengths, strengths of restraint, theological strengths, and intellectual strengths. The first factor, *emotional strengths,* explained 18% of the variance, and was loaded by strengths such as humor and bravery. The factor of *interpersonal strengths* explained about 16% of the variance, and included strengths such fairness, modesty, kindness, teamwork, and forgiveness. The factor named *strengths of restraint* explained 12% of the variance, and comprised strengths such as self-regulation, persistence, and prudence. The *theological strengths* factor explained 12% of the variance and was loaded by strengths such as spirituality, gratitude, and love. The factor representing *intellectual strengths* explained less variance (10%) and contained strengths such as love of learning, appreciation of beauty and excellence, and curiosity.

Discussion

The first aim of this study was to examine the psychometric properties and reliability of the Spanish version of the VIA-IS in a sample of adults from different places in Spain. Overall, our results indicated that the Spanish VIA-IS met psychometric standards for reliability. The degree of negative skew shown by subscale means was reported in previous reports (Linley et al., 2007; Littman-Ovadia & Lavy, 2012; Peterson, Park, & Seligman, 2006). All 24 subscales demonstrated satisfactory internal consistency as well as acceptable corrected item-subscale correlations. These psychometrics findings are consistent with data collected in the United States (Peterson et al., 2006), in the United Kingdom (Linley et al., 2007), in Switzerland (Ruch et al., 2010), in Israel (Littman-Ovadia & Lavy, 2012), and in India (Singh & Choubisa, 2010).

Regarding intercorrelations among the VIA-IS subscales, the highest correlation coefficient was found between the strengths of zest and hope, which corroborates the findings of Ruch et al. (2010). Correlational analyses showed an exception: the strengths of modesty and creativity were the only ones not significantly correlated. This result has previously been described by Littman-Ovadia and Lavy (2012).

The second goal of the present study was to present data on the demographic correlates of the VIA-IS subscales. Our results on gender differences in strengths' endorsement seem to be consistent with those of Furnham and Lester (2012), Karris and Craighead (2012), Linley et al. (2007), Littman-Ovadia and Lavy (2012), Park et al. (2004), Peterson and Seligman (2004), Ruch et al. (2010), and

Table 4
Varimax rotated 5-factor solution for the VIA-IS (principal-components analysis)

Strengths	Factor 1	Factor 2	Factor 3	Factor 4	Factor 5	h²
Social intelligence	**.72**	.23	.23	.18	.14	.68
Humor	**.69**	.29	-.11	.31	.04	.67
Perspective	**.68**	.17	.40	.04	.27	.73
Bravery	**.67**	.05	.28	.22	.16	.61
Creativity	**.67**	.00	.06	.04	.48	.69
Leadership	**.58**	**.50**	.17	.16	.12	.65
Fairness	.22	**.79**	.17	.05	.23	.76
Modesty	-.03	**.72**	.31	.04	-.02	.62
Kindness	.37	**.67**	.05	.35	.09	.72
Teamwork	.34	**.66**	.12	.34	-.03	.68
Forgiveness	.06	**.66**	.15	.28	.24	.60
Self-regulation	.15	.19	**.76**	.22	.13	.70
Persistence	.27	.08	**.72**	.36	.10	.74
Prudence	.03	.49	**.70**	.01	.14	.76
Open-mindedness	.44	.27	**.55**	-.15	.39	.74
Honesty	.41	**.44**	**.50**	.16	.03	.65
Spirituality	.03	.13	.19	**.68**	.13	.54
Gratitude	.22	.40	.13	**.67**	.30	.76
Love	.38	.34	-.03	**.58**	.00	.59
Zest	**.53**	.08	.26	**.57**	.26	.74
Hope	**.47**	.13	.34	**.55**	.26	.72
Love of learning	.12	.05	.25	.05	**.79**	.71
Appreciation of beauty	.17	.27	-.02	.29	**.70**	.68
Curiosity	.41	.08	.16	.30	**.67**	.75
Explained variance (in %)	18.21	15.95	12.38	11.66	10.42	68.62

Note. Bold indicates highest factor loadings of the subscales; h² = communality.

Shimai et al. (2006), who reported that women scored higher than men on interpersonal character strengths such as kindness and love. Our analysis also showed that females had higher ratings than males on gratitude, and men scored higher than women on the strength of creativity, which corroborates the findings of Karris and Craighead (2012), Linley et al. (2007), Littman-Ovadia and Lavy (2012), Ruch et al. (2010), and Shimai et al. (2006).

However, the effect sizes for gender differences were typically small, which is consistent with the previous findings (e.g., Karris & Craighead, 2012; Linley et al., 2007). The rank order correlation between the strengths of both men and women indicated that there was considerable convergence between their signature strengths. We consider that results on gender differences in character strengths should therefore be interpreted with caution. Our conclusions conform to those drawn by Linley et al. (2007) and Littman-Ovadia and Lavy (2012). Although gender differences were found in character strengths scores, we agree that data seem to indicate that there are more similarities than differences in the prevalence of strengths among men and women.

The strongest correlations between age and character strengths were found with strengths related to wisdom and knowledge (specifically, love of learning, and curiosity) and strengths of temperance (prudence, self-regulation, and forgiveness). These findings are consistent with those of Ruch et al. (2010), who reported that older age correlated with higher scores for the temperance strengths, and with those of Linley et al. (2007), who reported that curiosity, love of learning, forgiveness, and self-regulation are among the strengths with the strongest associations with age. Overall, strengths scores tended to increase with age, although the correlations were generally small. However, our results differ from some studies (Littman-Ovadia & Lavy, 2012; Park et al., 2004), which found that character strengths did not relate to age. This result might be related to the narrow age ranges of the participants of these studies. Nevertheless, future research projects are needed to explain this finding.

In the present study, the correlations between strengths and educational level were fewer and typically smaller than those observed between character strengths and age. Love of learning and curiosity were the strengths most strongly correlated with education. Such findings are consistent with the associations reported by Ruch et al. (2010), who found significant positive correlations between strengths of wisdom and knowledge and educational level.

The correlates of the Spanish version of VIA-IS with life satisfaction corroborated the findings of previous studies (e.g., Buschor et al., 2013; Gradisek, 2012; Littman-Ovadia & Lavy, 2012; Park et al., 2004; Peterson et al., 2007; Ruch et al., 2010; Shimai et al., 2006). Most consistently and strongly associated with satisfaction with life were the strengths of hope, zest, gratitude, love, and curiosity. On the other hand, again consistent with preceding research, we found evidence that the strengths of modesty, fairness, appreciation of beauty and excellence, love of learning, and prudence were weakly associated with life satisfaction.

Existing research on the relationships of character strengths with affective components of well-being is limited. The results of the current study supported earlier reports on this issue: most of the VIA-IS subscales were positively correlated with positive affect and negatively associated with negative affect, and the significant positive correlations of strengths with positive affect were generally stronger than the significant correlations of strengths with negative affect. Specifically, these results are consistent with those of Güsewell and Ruch (2012), who reported positive correlations between dispositional positive emotions and character strengths. We also found that the strengths of zest and hope yielded the highest (positive) correlations with positive affect and the highest (negative) correlations with negative affect at the same time. These findings are similar to those of Littman-Ovadia and Lavy (2012), who mentioned the strengths of hope, curiosity, and zest among the five highest

character strengths related to positive affect, as well as among those most strongly associated with negative affect. With regard to previous literature (Seligman, 2002; Peterson & Seligman, 2004; Seligman et al., 2005; Park & Peterson, 2008), the present research supports the theoretical assumptions as well as the empirical evidence concerning the positive contributions of the character strengths to subjective well-being.

Our third goal was to examine the factorial structure of the Spanish version of the VIA-IS. The results of a Principal Components factor analysis of the 24 character strengths were consistent with earlier reports (Littman-Ovadia & Lavy, 2012; Ruch et al., 2010; Shryack et al., 2010). A five-dimensional model showed an acceptable fit to the data, replicating at first glance the original five-factor structure reported by the authors of the VIA-IS (Peterson & Seligman, 2004). We also named the five factors as follows: *emotional strengths*, *interpersonal strengths*, *strengths of restraint*, *theological strengths*, and *intellectual strengths*. However, our five components were not identical to the five factors obtained by Peterson and Seligman (2004) and to those subsequently proposed by Littman-Ovadia and Lavy (2012) and Ruch et al. (2010). Thus, most of the groups of strengths comprising each factor were not exactly the same as those of previous models, but they were similar. Furthermore, our results shed light on the connection between the five factor structure of the VIA-IS and the VIA classification, in terms of six major virtues, proposed by Peterson and Seligman (2004). We found that the relationships between the 24 character strengths did not generate a factor structure consistent with their classification under six core virtues. This discrepancy gives additional support to the empirical evidence (e.g., Macdonald et al., 2008) against the six virtues model. It may be explained by the fact that the roots of this model are basically theoretical. As mentioned in the introduction, the VIA classification was the framework from which the VIA-IS was constructed, though the assignment of each of 24 strengths to one of the six virtues was not based on empirical evidence but based on theoretical grounds. Therefore, these findings have important implications for the development and improvement of the VIA classification (i.e., by reassigning the strengths to the appropriate factor or virtue) and the VIA-IS, which could include the measurement of major factors or virtues (i.e., by summing up the strengths scores assigned to a factor or virtue).

Taken as a whole, the Spanish adaptation of the VIA-IS demonstrated to be a valid instrument to assess the character strengths proposed by the VIA classification. The five-dimensional model replicated the original five-factor structure reported by Peterson and Seligman (2004). Therefore, our results support the assumption that the original factor structure generalizes to Spanish population and provide evidence for the factorial validity of the VIA-IS in this nation. The significant correlations found with other constructs, concretely with life satisfaction and with positive and negative affect, were basically the same as those obtained in previous studies (e.g., Littman-Ovadia & Lavy, 2012; Park et al., 2004; Peterson et al., 2007; Ruch et al., 2010). These data seem to be stable across different nations, cultures and languages, and support the construct validity of the Spanish version of the VIA-IS.

Nevertheless, the present study has limitations that should be acknowledged because they point the way to future research. First, our sample did not have a representative gender balance (it consisted mainly of females), and most of the participants were recruited from universities. Further work with a more heterogeneous sample, drawn from different contexts, is therefore suggested for better generalizability. A cross-validation with clinical samples could make the use of the Spanish version of the VIA-IS possible in clinical work. Character strengths theory and practice encompass 60-70% of Positive Psychotherapy (PPT; Seligman, Rashid, & Parks, 2006). The central premise of PPT is that building strengths of patients may counteract negative symptoms. The VIA-IS could be useful to measure

and to identify character strengths in order to deploy these positive resources and to increase well-being in patients.

Second, the measures used in this study were based solely on self-report questions, where social desirability bias could be of special concern. However, Peterson and Park (2011) state that the assessment of positive traits, such as character strengths, allows respondents to say something good about themselves, and may therefore reduce concerns about socially desirable responding. Peterson and Seligman (2004) reported that Marlowe-Crowne social desirability scores did not significantly correlate with VIA-IS scores, with the exception of the subscales of prudence and spirituality. This assertion was consistent with the results obtained by Ruch et al. (2010), who found that the VIA-IS scores were not strongly biased by social desirability. Macdonald et al. (2008), in contrast, found significant correlations between social desirability and some character strengths. This inconsistency suggests that further work should be done to continue the development of multi-method strategies for assessing character strengths (i.e., informant reports, structured interviews). Moreover, we have no test-retest reliability data, so future research is required to examine its temporal stability in the Spanish population. Connections between the VIA-IS subscales and other psychological constructs are also important issues for future studies in order to give support to the construct validity of the character strengths and their measure. Despite these limitations, the VIA-IS appears to be a valuable and useful tool to assess the 24 character strengths included in the VIA classification. This measure makes empirical research on character strengths in Spain possible and contributes to the growth of the body of literature on this field.

Conflict of Interest

The authors of this article declare no conflict of interest.

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