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## **Personality, self-efficacy and self-esteem as predictors of psychological well-being of workers: the flourishing scale (5-FS)**

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**Abstract:** Flourishing refers to a person's perceived feelings that life is going well. The purpose of this study is to increase our understanding of the flourishing experience, one of the psychological processes that occur in professional contexts. It aims to determine the relationship between flourishing and personality, self-efficacy, and self-esteem. Participants in the study were 856 workers selected through non-probability sampling and the data collected were processed with the SPSS 25.0 program. The factor obtained has adequate reliability and evidence of validity. A positive relationship is established between self-esteem, self-efficacy and flourishing. Regarding personality, the relationship is positive in relation to emotional stability and negative in relation to openness, conscientiousness and agreeableness. Emotional stability, self-efficacy, conscientiousness, self-esteem and agreeableness are the variables that account for greater variance when predicting flourishing.

**Keywords:** flourishing; work; personality; self-esteem; self-efficacy.

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## 1 Introduction

Flourishing or personal growth (i.e., the experience of flourishing, prospering, growing) is a construct found within new theories of well-being that have their origins in the desire to be happy. It alludes to a state of optimal functioning characterised by four key components:

- a goodness, resulting from the combination of happiness, satisfaction, and higher functioning
- b generativity, resulting from the manifestation of expanded repertoires of thought, action, and flexibility of behaviour

- c growth, resulting from an increase in enduring personal and social resources
- d resilience, characterised by survival and growth after dealing with adversity (Fredrickson and Losada, 2005).

Flourishing refers to the feelings of happiness and well-being that a person has about certain aspects of his/her life. It is a psychological construct that refers to the positive evaluations that people make about their social relationships, purpose and meaning of life. It measures self-efficacy and self-respect (Diener and Biswas-Diener, 2008). Furthermore, it is the combination in a single construct of positive feelings and the perception that one's life is working well (Huppert, 2009; Huppert and So, 2013; Keyes, 2002). It is identified as one of the key mental health factors in scientific literature.

Keyes (2002) was the first contemporary author to use the term (Hone et al., 2014). For Keyes, adults with complete mental health are *flourishing* in life with high levels of well-being. To be flourishing, then, is to be filled with positive emotion and to be functioning well psychologically and socially. Adults with incomplete mental health, on the other hand, are *languishing* in life with low well-being. Keyes (2002) divided measures of subjective well-being into two clusters of symptoms: emotional well-being and functional well-being. The measures of emotional well-being comprise a cluster of symptoms that reflects emotional vitality, and the measures of psychological and social well-being reflect a multifaceted cluster of symptoms of positive functioning (Keyes, 2002). Ryan and Frederick (1997) tell us that this positive feeling of vitality and energy refers to more than just being active, excited, or even having stored caloric reserves, and that it also refers to a specific psychological experience of having enthusiasm and energy.

Some authors (Ryan and Deci, 2000; Ryff, 1989; Ryff and Singer, 1998), following previous theories of humanistic psychology, suggest that there are several universal human psychological needs, such as the need for competence, relationship and self-acceptance, and a number of these characteristics are evaluated by the flourishing scale (Diener et al., 2010; Diener and Biswas-Diener, 2008). The flourishing scale (8-FS) is a measure of psychosocial flourishing, based on recent theories about psychological and social well-being. The eight items are designed to measure socio-psychological prosperity and to complement the existing measures of subjective Well-being within the framework of psychological theories of human flourishing.

Diener and Biswas-Diener's (2008) thesis sets out the following formula of happiness thus: wellbeing is equal to positive affective states minus negative affective states, plus vital satisfaction and personal growth (flourishing). For these authors, the three essential components involved in leading a good life are:

- 1 having a life full of positive emotions (of all kinds)
- 2 having occasional negative emotions
- 3 having a life that revolves around activities which we enjoy and which guide us towards achieving certain values that we consider as goals (life with purpose) and that give meaning to the effort that they require.

The scale has been validated in various languages and for various populations: French (Villieux et al., 2016), Japanese (Sumi, 2014a, 2014b), New Zealanders (Hone et al., 2014), Portuguese (de Castro et al., 2004; Silva and Caetano, 2013), Italians (Giuntoli et al., 2017), and Koreans (Kim, 2018). Two validations were found in Spanish (Checa

et al., 2017; De la Fuente et al., 2017) but neither of them presents a confirmatory factorial analysis in workers, this being one of the objectives set out in this study.

The flourishing construct has been studied in numerous environments and with groups such as hope in Iranian adults (Khodarahimi, 2013), therapy for adults with spinal cord injury (Perera et al., 2018). Students of various nationalities, the benefits of learning music in the third age (Ellis, 2018), and within the area of career construction (Zhuang et al., 2018). Various professional categories are to be found within these studies, including: teachers (Redelinghuys et al., 2019), staff (Persson et al., 2021) and employees in organisations (Anasori et al., 2020; Coetzee and Oosthuizen, 2017; Rautenbach, 2015; Rautenbach and Rothmann, 2017).

The findings about the relationship between personality traits and flourishing indicate that there is a relationship between the two variables. Although various studies have addressed this relationship, Zhuang et al. (2018) examined a mediation model that links indicators of career adaptivity (big-five personality and approach/avoidance traits) to psychological well-being (psychological flourishing and life satisfaction) through career adaptability and meaning of life (presence of life meaning and search for life meaning). Using a sample of Chinese university students, they found that career adaptability and the presence of life meaning mediated the effects of openness to experience, conscientiousness, approach trait, and avoidance trait on individual well-being in sequence. In Villieux et al. (2016), using a sample of French students and the big five inventory (BFI) (John et al., 1991), adapted to French by Plaisant et al. (2010), found that personality traits accounted for 30% of variance in predicting psychological Flourishing.

General self-efficacy is the belief in one's competence to cope with a wide range of stressful or challenging demands (Luszczynska et al., 2005). It has been found to be a valid construct in a broad range of ethnic and cultural settings globally (Luszczynska et al., 2005; Schwarzer et al., 1997). It has not been widely studied in relation to Flourishing, especially with the eight item FS. However, Cosamalón (2019) finds a positive relationship between self-efficacy and flourishing in coaching interventions. In Turkish students, Dogan et al. (2013) find a positive and significant relationship between psychological well-being, emotional self-efficacy and affect balance. In the same study, Dogan et al. (2013) found significant relationships between flourishing, emotional self-efficacy and self-esteem. They observed that psychological well-being and affect balance have positive effects on self-esteem and happiness, emotional self-efficacy has a positive effect on self-esteem and that self-esteem has a positive effect on happiness. Asghar et al. (2022) related it to proactive personality. Affective components of both identification and commitment were negatively associated with turnover intentions, and positive in-group affect predicted perceptions of self-efficacy (Harris and Cameron, 2005). Mata et al. (2021) reveal that team diversity enhances project performance through trust and absorptive capacity. The team members utilise their innovative capabilities and problem-solving skills for achieving project success.

The aim of this article is to increase our understanding of the experience of Flourishing, one of the psychological processes that occur in professional contexts. It aims to test the psychometric properties of the Spanish version of the 8-item FS, formerly known as the Psychological Well-Being Scale PWBS (Diener and Biswas-Diener, 2008; Diener et al., 2010) in Spanish-speaking professionals and to study the relationship between flourishing and personality, self-efficacy and self-esteem.

- Objective 1 To analyse the internal structure of the original English scale using exploratory factor analysis (henceforth EFA).
- Objective 2 To replicate the factors extracted from the EFA through confirmatory factor analysis (CFA).
- Objective 3 To check that the scale has adequate reliability.
- Objective 4 To check if the scale shows signs of validity with external correlates (personality traits, self-esteem and self-efficacy).
- Objective 5 To check to what extent flourishing states are influenced by personality (personality traits, self-esteem and self-efficacy).

## 2 Method

### 2.1 Participants

The participants in this study were 856 Spanish workers (42% men and 58% women). The inclusion criteria were living in Spain, being a Spanish citizen, being of legal age (18 years), working in the current company for at least one year and working full time. Table 1 provides sociodemographic data.

**Table 1** Sociodemographic characteristics of participants from the three subsamples

		<i>Sample 1</i> ( <i>n</i> <sub>1</sub> = 333)	<i>Sample 2</i> ( <i>n</i> <sub>2</sub> = 526)	<i>Sample 3</i> ( <i>n</i> <sub>3</sub> = 856)
Gender	Men	47.7%	36.3%	42.00%
	Women	52.3%	63.7%	58.00%
Age (years)		M = 43.59 (SD = 12.98)	M = 44.83 (SD = 10.0)	M = 44.21 (SD = 11.49)
Marital status	Married	63.4%	58.1%	60.75%
	Single	23.1%	29.4%	26.25%
	Divorced or separated	12.9%	11.3%	12.10%
	Widower/widow	0.6%	1.1%	0.85%
Level of education	Not completed elementary education	1.8%	0.4%	1.10%
	Completed elementary education	16.5%	1.1%	8.80%
	Completed secondary education	56.2%	18.0%	37.10%
	Completed college/university education	18.0%	44.6%	31.30%
	Completed master's degree/doctorate	7.5%	35.9%	21.70%
Time in the organisation (years)		M = 14.53 (SD = 12.56)	M = 11.88 (SD = 9.98)	M = 13.20 (SD = 11.48)

## 2.2 Instruments

The psychological well-being scale (flourishing scale) (Diener et al., 2010; Diener and Biswas-Diener, 2008) was adapted into Spanish by Pozo-Muñoz et al. (2016) for Spanish and Colombian university students. It consists of 8 items ( $\alpha = 0.87$ ; for example, '1.- I lead a meaningful and purposeful life') with a Likert-type response scale of 7 alternatives (1 = 'strongly disagree', 7 = 'strongly agree'). It has a good level of internal consistency (Cronbach's alpha 0.87), and a moderately high temporal reliability (0.71). The scale provides a single rating of psychological well-being related to flourishing or personal growth. It measures the assessment that people make about their social relationships, purpose and meaning of life, self-efficacy and self-respect. It concerns the feeling of happiness and well-being that a person has. It strongly correlates with the results on other scales of psychological well-being and feelings (Diener et al., 2010). The scale combines dimensions of well-being that Ryff (1989) and Ryan and Deci (2001) stress as being positive aspects for a person's daily functioning – such as competence, self-acceptance, meaning and relatedness – with optimism, giving, and engagement, which have been shown to contribute to well-being (Hone et al., 2014).

The personality inventory (OPERAS) (Vigil-Colet et al., 2013) is based on a model of the big five factors of personality. It comprises 40 items that are answered using a five-point Likert scale (1 = *totally disagree* to 5 = *totally agree*). This instrument measures extraversion ( $\alpha = 0.86$ ; e.g., '2. I am the life and soul of the party'); emotional stability ( $\alpha = 0.86$ ; e.g., '32. I change my mood often'); conscientiousness ( $\alpha = 0.77$ ; for example, '5. I always keep my word'); agreeableness ( $\alpha = 0.71$ ; e.g., '12. I respect others'); and openness to experience ( $\alpha = 0.81$ ; e.g., '24. I like to try new things').

The general self-efficacy scale (GSE) (Baessler and Scharzer, 1993) adapted for the Spanish population by Sanjuán et al. (2000) is made up of 4 four-point Likert-type items (from 1 = *no agreement/not at all true* to 4 = *totally agree/completely true*). It measures the level of general self-efficacy, which is understood as people's stable belief regarding their ability to adequately handle a wide range of stressors in daily life (Bandura, 1992). The scale showed internal consistency ( $\alpha = 0.87$ ; e.g., '7. Whatever happens, I am usually able to handle it').

The Spanish version of the Rosenberg self-esteem scale (EAR) (Rosenberg, 1965) adapted by Martín-Albo et al. (2007) is a four-point Likert scale with 10 items (from 1 = *strongly disagree* to 4 = *strongly agree*). Five of the items are written positively and five are written negatively. The scale showed internal consistency ( $\alpha = 0.86$ ; e.g., '4. I am able to do things as well as most people').

## 2.3 Procedure

The data were extracted from the doctoral thesis by Pérez-Moreiras (2020) about *Energetic Intelligence and Coaching*. To obtain all the samples we used a convenience procedure, also known as a non-probabilistic (Hernández et al., 2004) or random-accidental procedure (Kerlinger and Lee, 2004). To collect the data, the directors of several companies were initially contacted by telephone and asked the most opportune time to access the workers. They were also given a booklet, which they had to answer in their usual working place, which included a cover letter, informed consent, and questionnaires to answer. The participants were informed that the data obtained is completely confidential and anonymous. The participants answered voluntarily and did

not receive any kind of gratification. Anonymity and confidentiality were guaranteed. Administering the questionnaires took between 20 and 30 minutes. The response rate was sample 1: 90%, sample 2: 85% and sample 3: 87.5%.

## 2.4 Data analysis

To analyse the internal structure ( $n_1 = 333$ ), the FACTOR 8.02 program (Lorenzo-Seva and Ferrando, 2006) was used because it enables the analysis to be performed using polychoric correlation matrices, which are more appropriate when the items have a Likert-type response format, and also because it allows the user to choose the number of factors to be retained from the parallel analysis (Timmerman and Lorenzo-Seva, 2011). The SPSS software (25.0) was used to calculate reliability.

CFA was conducted using Mplus software (Version 6.12), obtaining a latent unifactorial structure ( $n_2 = 526$ ). Structural equation modelling (SEM) provides a method for examining the underlying structure of latent variables. These factors can be estimated by other manifest variables (Schumacker, 2004). The SPSS program (25.0) was also used to calculate reliability.

To assess the model's fit we used goodness-of-fit indices in combination with the Satorra-Bentler  $\chi^2$  statistic. We also used the comparative fit index (CFI), the root mean square error of approximation (RMSEA), and the RMSEA 90% confidence interval (CI). Values between 0.90 and 0.94 for the CFI indicate an adequate fit, whereas values of 0.95 and higher indicate excellent fit. Values smaller than 0.10 for the RMSEA indicate an acceptable fit, smaller than 0.08 a good fit, and lower than 0.05 an excellent fit. The RMSEA 90% CI was also used to assess hypotheses of very close fit ( $\text{RMSEA} < 0.05$ ) and no fit.

For regression analysis ( $n_3 = 856$ ), we used the stepwise option of the SPSS Statistics 25 software (Hinton et al., 2014). The program incorporates each predictive variable into the model depending on the extent to which it accounts for variance. The aim is thus to explain the maximum variance with the minimum possible number of predictive variables. There were seven predictive variables: five involving personality (extraversion, conscientiousness, emotional stability, agreeableness, openness to experience) plus two others (self-esteem and self-efficacy).

## 3 Results

### 3.1 Exploratory factor analysis

The results of Bartlett's test of sphericity (chi square,  $\text{df } 28 = 1,225.8$ ;  $p < 0.01$ ) and the Kaiser-Meyer-Olkin (KMO) measure of sampling adequacy (0.907), which was higher than the recommended value of 0.60 (Kaiser, 1970), showed that the data in sample 1 were suitable for the application of factor analysis. Parallel analysis (Timmerman and Lorenzo-Seva, 2011) and the 'minimum average partial' criterion showed the appropriateness of the one-factor solution. Table 2 shows the saturations matrix, mean, standard deviation, corrected item-total correlation, skewness and kurtosis.



**Table 2** Flourishing scale (8-FS)

<i>Items</i>	<i>(a)</i>	<i>(b)</i>	<i>(c)</i>	<i>(d)</i>	<i>(e)</i>	<i>(f)</i>
1 Llevo una vida significativa y con propósito [I lead a purposeful and meaningful life]	0.700	5.52	1.258	0.655	−1.107	1.315
2 Mis relaciones sociales me brindan apoyo y son reconfortantes. [My social relationships are supportive and rewarding]	0.630	5.55	1.257	0.614	−1.059	1.005
3 Me siento involucrado e interesado en mis actividades cotidianas. [I am engaged and interested in my daily activities]	0.736	5.57	1.151	0.696	−1.126	1.674
4 Contribuyo activamente a la felicidad y el bienestar de otros. [I actively contribute to the happiness and well-being of others]	0.716	5.77	1.148	0.661	−1.165	1.555
5 Soy competente y capaz en las actividades que son importantes para mí. [I am competent and capable in the activities that are important to me]	0.709	6.01	1.131	0.672	−1.913	4.860
6 Soy una buena persona y vivo una buena vida. [I am a good person and live a good life]	0.777	5.96	1.083	0.721	−1.505	3.348
7 Soy optimista acerca de mi futuro. [I am optimistic about my future]	0.679	5.54	1.327	0.622	−1.081	1.129
8 La gente me respeta. [People respect me]	0.735	5.70	1.146	0.689	−1.425	3.065
Explained variation (%)	77.72					

Notes: Saturations matrix, mean, standard deviation, corrected item-total correlation, skewness and kurtosis for the brief one-factor scale ( $n_1 = 333$ ). Flourishing scale (8 items), formerly known as the psychological well-being scale (Diener and Biswas-Diener, 2008; Diener et al., 2010): (a) loading: Spanish version (unifactorial); (b) mean; (c) standard deviation; (d) corrected item/total correlation; (e) skewness; (f) kurtosis.

### 3.2 Reliability

The reliability of sample 1 with Cronbach's  $\alpha$  value is 0.894 and that of sample 2 is 0.888. The values are therefore higher than the recommended value of 0.70 (Nunnally and Bernstein, 1994).

### 3.3 Confirmatory factor analysis

We carried out a CFA (Sample 2) based on structural equations in order to verify the adequacy of the 1-factor structure (Table 3 and Figure 1). We made use of the following goodness-of-fit indicators: the Tucker-Lewis index (TLI) (Lévy-Mangin and Varela-Mallou, 2006), the CFI (Lévy-Mangin and Varela-Mallou, 2006) and the RMSEA (Fan and Sivo, 2007). Figure 15 shows the following indicators (RMSEA = 0.06;

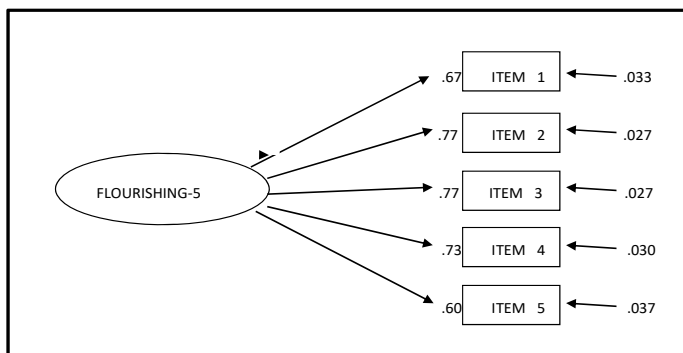
CFI = 0.98 and TLI = 0.97), which confirm an acceptable fit of the model since all the indicators are close to values considered acceptable. In addition, all the saturations range between 0.60 and 0.77.

**Table 3** Flourishing scale (5-FS)

Items	(a)	(b)	(c)	(d)	(e)	(f)
1 Me siento involucrado e interesado en mis actividades cotidianas [I am engaged and interested in my daily activities]	0.583	5.89	1.075	0.718	-1.158	1.343
2 Contribuyo activamente a la felicidad y el bienestar de otros [I actively contribute to the happiness and well-being of others]	0.695	6.00	0.995	0.666	-1.432	2.993
3 Soy competente y capaz en las actividades que son importantes para mi [I am competent and capable in the activities that are important to me]	0.375	6.28	0.833	0.627	-1.671	4.383
4 Soy una buena persona y vivo una buena vida [I am a good person and I live a good life]	0.514	6.31	0.849	0.680	-1.624	3.455
5 La gente me respeta [People respect me]	0.632	6.05	1.011	0.628	-1.745	4.393
Explained variation (%)						

Notes: Saturations matrix, mean, standard deviation, corrected item-total correlation, skewness and kurtosis for the brief one-factor scale ( $n_2 = 526$ ). Flourishing scale (5 items), formerly known as the psychological well-being scale (Diener and Biswas-Diener, 2008; Diener et al., 2010): (a) loading: Spanish version (unifactorial); (b) mean; (c) standard deviation; (d) corrected item/total correlation; (e) skewness; (f) kurtosis

**Figure 1** CFA of the flourishing scale (5 items) FS-5 ( $n_2 = 526$ )



Notes: Chi-square = 12.888; df = 5; p-value = 0.0240; RMSEA = 0.06; CFI = 0.98 and TLI = 0.97.

### 3.4 Correlations analyses

Indications of validity for the scale were obtained through correlations with other scales and by carrying out a predictive study. Table 4 shows the results obtained. It can be seen that Flourishing correlates positively and significantly with all the variables analysed. The highest correlations are with emotional stability ( $r = 0.53, p < 0.01$ ), self-efficacy ( $r = 0.50, p < 0.01$ ) and self-esteem ( $r = 0.49, p < 0.01$ ), followed by conscientiousness ( $r = 0.43, p < 0.01$ ), agreeableness ( $r = 0.36, p < 0.01$ ), extraversion ( $r = 0.30, p < 0.01$ ), and openness to experience ( $r = 0.21, p < 0.01$ ).

**Table 4** Correlation between flourishing variables: personality (extraversion, emotional stability, conscientiousness, agreeableness and openness), self-efficacy and self-esteem (N = 856)

	1	2	3	4	5	6	7	8
1 Flourishing								
2 Extraversion	0.30**							
3 Emotional stability	0.53**	0.40**						
4 Conscientiousness	0.43**	0.22**	0.48**					
5 Agreeableness	0.36**	0.18**	0.53**	0.34**				
6 Openness	0.21**	0.24**	0.31**	0.28**	0.30**			
7 Self-efficacy	0.50**	0.32**	0.56**	0.39**	0.27**	0.22**		
8 Self-esteem	0.49**	0.38**	0.64**	0.37**	0.34**	0.26**	0.52**	

Note: \*\* $p < 0.01$ .

### 3.5 Multiple regression

A multiple regression model was also carried out to verify the effects of the predictor variables on the criterion variables in relation to the 5-FS (Table 5). This technique allows us to objectively evaluate the predictive capacity of a set of independent variables. Table 5 shows the data for the adjusted  $R^2$  indices and the significant beta coefficients between the criterion and predictive variables.

Flourishing in relation to the model accounted for 39.6% with the participation of the emotional stability, self-efficacy, conscientiousness, self-esteem and agreeableness subscales. Self-efficacy was the variable that had the greatest impact on the variance of flourishing, accounting for 23% of the total. All of them show positive betas: emotional stability ( $\beta = 0.15$ ), self-efficacy ( $\beta = 0.23$ ), conscientiousness ( $\beta = 0.17$ ), self-esteem ( $\beta = 0.17$ ) and agreeableness ( $\beta = 0.09$ ).

**Table 5** Summary of the models, variables and coefficients of the regression analysis (stepwise method) for flourishing

Models and variables	Models						Coefficients				
	R	R <sup>2</sup>	R <sup>2</sup> ad.	R change	F change	sig	B	SE	β	t	sig
Model-1	0.536	0.288	0.287	0.288	344.969	0.000					
OP.EE							0.21	0.01	0.53	18.57	0.000
Model-2	0.591	0.349	0.347	0.061	79.942	0.000					
OP.EE							0.14	0.01	0.36	10.90	0.000
Self-efficacy							0.23	0.02	0.30	8.94	0.000
Model-3	0.614	0.377	0.374	0.028	38.050	0.000					
OP.EE							0.11	0.01	0.29	8.30	0.000
Self-efficacy							0.21	0.02	0.26	8.02	0.000
OP.CO							0.08	0.01	0.19	6.16	0.000
Model-4	0.627	0.393	0.390	0.016	23.121	0.000					
OP.EE							0.08	0.01	0.20	5.20	0.000
Self-efficacy							0.18	0.02	0.22	6.75	0.000
OP.CO							0.07	0.01	0.18	6.01	0.000
Self-esteem							0.16	0.03	0.17	4.80	0.000
Model-5	0.632	0.399	0.396	0.006	8.826	0.003					
OP.EE							0.06	0.01	0.15	3.64	0.000
Self-efficacy							0.18	0.02	0.23	6.96	0.000
OP.CO							0.07	0.01	0.17	5.61	0.000
Self-esteem							0.16	0.03	0.17	4.84	0.000
OP.AG							0.03	0.01	0.09	0.97	0.003

Note: Dependent variable: flourishing.

## 4 Discussion

The psychological well-being scale (flourishing scale) (Diener and Biswas-Diener, 2008; Diener et al., 2010) is an instrument that enables us to evaluate the assessments that people make about their social relationships, purpose and meaning of life, self-efficacy and self-esteem. In this article, we have stressed the importance of these types of factors in coaching psychology processes and the need for instruments capable of measuring them correctly. The results show that the scale as applied to Spanish-speaking workers has an adequate internal structure of one factor, appropriate reliability, and sufficient evidence of validity.

The first objective ( $n_1 = 333$ ) was to analyse the internal structure of the original English scale using EFA. This objective is confirmed. The EFA results support an internal structure of one factor coherent with the original (Diener et al., 2010) and with other previous studies on the Spanish population (Checa et al., 2017). It has also been validated for students of different nationalities including New Zealanders (Hone et al., 2014), Portuguese (Silva and Caetano, 2013), French (Villieux et al., 2016), Japanese (Sumi, 2014a, 2014b) and Italian students (Giuntoli et al., 2017), and also in Portuguese workers (Silva and Caetano, 2013), the general Chinese population (Tang et al., 2016) and Iranian adults (Khodarahimi, 2013). This unifactorial structure explains the variance in different versions: Spain (general population: 42.3%), France (students: 44%), Portugal (students and workers: 53%), China (general population: 53.24%), Iran (adults: 59.46%) and Japan (students: 73.1%). The variance of our version for a Spanish working population is 77.72%.

The second objective was to perform the CFA and this objective is confirmed. The results of the CFA of the 5-FS support the one-factor model and show a satisfactory fit in a sample of Spanish-speaking professionals. CFA of the Flourishing scale (5-FS) gave ( $n_2 = 526$ ) (chi-square = 12,888;  $df = 5$ ;  $p$ -value = 0.0240; RMSEA = 0.06; CFI = 0.98 and TLI = 0.97). As we can see from Figure 1, in our study the most significant items are reduced to five.

The third objective was to analyse reliability. The overall reliability of the scale used on Spanish-speaking workers in the two subsamples is 0.889 and 0.882 respectively. It can be seen that these are higher than the recommended value of 0.70 (Nunnally and Bernstein, 1994). In the original English version, total reliability is 0.82 (Diener et al., 2010). In other populations, we found the following values: Spain (general population: 0.84), France (students: 0.82), Portugal (0.78 for students, and 0.83 for workers), China (general population: 0.93), Iran (adults: 0.89) and Japan (students: 0.95). Objectives 2 and 4 are therefore met, since the reliability of the Spanish version with workers is good. These results are in line with previous studies.

The fourth objective was to show evidence of validity, based on the psychometric results used in the psychological well-being scale (flourishing scale), as a criterion variable of the self-esteem, self-efficacy and personality traits. The indications of validity of the scale studied were obtained through correlations with other scales and also by carrying out a predictive study (Table 4). It can be seen that flourishing correlates positively and significantly with all the variables analysed. The highest correlations are with emotional stability ( $r = 0.53$ ,  $p < 0.01$ ), self-efficacy ( $r = 0.50$ ,  $p < 0.01$ ) and self-esteem ( $r = 0.49$ ,  $p < 0.01$ ) followed by conscientiousness ( $r = 0.43$ ,  $p < 0.01$ ), agreeableness ( $r = 0.36$ ,  $p < 0.01$ ), extraversion ( $r = 0.30$ ,  $p < 0.01$ ), and openness to experience ( $r = 0.21$ ,  $p < 0.01$ ).

The fifth objective was to check if flourishing states are influenced by personality (personality traits, self-esteem and self-efficacy). the aim of the first model was to identify the extent to which these predictor variables were able to predict the criterion variable 5-FS (Table 5). Emotional stability is the variable that has the greatest impact on flourishing. Regarding the five predictor variables, the betas are positive. Objective 5 is partially met since there are two variables (OP.EX and OP.OP) that do not predict flourishing in Spanish-speaking workers.

## **5 Conclusions**

The present study contributes to our understanding of personality variables that predict flourishing. Importantly, emotional stability, self-efficacy, conscientiousness, self-esteem and agreeableness are the variables that account for greater variance when predicting flourishing (Table 5). The emotional stability variable accounts for the highest percentage of variance (28.7%).

Within the limitations of this study, the fact that the sampling was carried out through an accidental and, therefore, non-probabilistic method should be mentioned. Regarding generality (Simons et al., 2017), there are limitations on the generalisability of the findings, for example for specific populations (non-working people) or specific contexts. Furthermore, the research could be enhanced by using SEM in the data analysis. The multiple regression analysis used to study the relationship between the predictor variables and the criterion variables only allowed us to obtain conclusions about the direct and inverse influence between the variables used.

Regarding the applicability of the data, having a valid and reliable tool (5-FS) to evaluate flourishing in Spanish-speaking workers means that it can be used in coaching psychology processes. It serves as an aid for understanding workers' emotional well-being and promotes coaching approaches based on evidence. It can also be used to improve decision-making in recruitment, development and matching position for executive coaches (de Haan et al., 2016). Although the presence of the concept of flourishing in the field has increased substantially in recent years, there is still little literature linking it to the object of our study variables.

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This research complies with the principles and evaluation criteria of the Ethics Committee of the Rovira i Virgili University with code: CEIPSA-2022-TD-0031.

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## **Informed consent**

The participants were informed of the confidentiality of the data collected, accepting their participation in the study before collecting them.

## **Data availability statement**

The authors confirm that the data supporting the findings of this study are available within the article.

## **References**

- Anasori, E., Bayighomog, S.W. and Tanova, C. (2020) 'Workplace bullying, psychological distress, resilience, mindfulness, and emotional exhaustion', *Service Industries Journal*, Vol. 40, Nos. 1–2, pp.65–89, <https://doi.org/10.1080/02642069.2019.1589456>.
- Asghar, F., Mahmood, S., Iqbal Khan, K., Gohar Qureshi, M. and Fakhri, M. (2022) 'Eminence of leader humility for follower creativity during COVID-19: the role of self-efficacy and proactive personality', *Frontiers in Psychology*, Vol. 12, p.790517, <https://doi.org/10.3389/fpsyg.2021.790517>.
- Baessler, J. and Scharzer, R. (1993) 'Spanish adaptation of the general self-efficacy scale', *Ansiedad y Estrés*, Vol. 2, No. 1, pp.1–8.
- Bandura, A. (1992) 'Social cognitive theory of social referencing', in Feinman, S. (Ed.): *Social Referencing and the Social Construction of Reality in Infancy*, pp.175–208, Springer, US, [https://doi.org/10.1007/978-1-4899-2462-9\\_8](https://doi.org/10.1007/978-1-4899-2462-9_8).
- Checa, I., Perales, J. and Espejo, B. (2017) 'Spanish validation of the flourishing scale in the general population', *Current Psychology*, Vol. 37, No. 4, pp.949–956, <https://doi.org/10.1007/s12144-017-9581-0>.

- Coetzee, M. and Oosthuizen, R.M. (2017) 'Work-role psychosocial flourishing: its mediation role on workplace bullying and employee turnover intention', *Journal of Psychology in Africa*, Vol. 27, No. 3, pp.211–215, <https://doi.org/10.1080/14330237.2017.1321826>.
- Cosamalón, M.C. (2019) *Bienestar y Autoeficacia en Clientes de Coaching*, in ProQuest Dissertations Publishing. Pontificia Universidad Católica del Perú-CENTRUM Católica.
- de Castro, J.R., Gallo, J. and Loureiro, H. (2004) 'Cansancio y somnolencia en conductores de ómnibus y accidentes de carretera en el Perú: estudio cuantitativo [Tiredness and sleepiness in bus drivers and road accidents in Peru: quantitative study]', *Revista Panamericana de Salud Pública*, Vol. 16, pp.11–18, <https://doi.org/10.1590/S1020-49892004000700002>.
- de Haan, E., Grant, A.M., Burger, Y. and Eriksson, P.O. (2016) 'A large-scale study of executive and workplace coaching: the relative contributions of relationship, personality match, and self-efficacy', *Consulting Psychology Journal*, Vol. 68, No. 3, pp.189–207, <https://doi.org/10.1037/cpb0000058>.
- De la Fuente, R., Parra, A. and Sánchez-Queija, I. (2017) 'Psychometric properties of the flourishing scale and measurement invariance between two samples of Spanish University Students', *Evaluation and the Health Professions*, Vol. 40, No. 4, pp.409–424, <https://doi.org/10.1177/0163278717703446>.
- Diener, E. and Biswas-Diener, R. (2008) 'The happiest places on earth: culture and well-being', in *Happiness*, pp.127–144, Blackwell, <https://doi.org/10.1002/9781444305159.ch8>.
- Diener, E., Wirtz, D., Tov, W., Kim-Prieto, C., Choi, D.w., Oishi, S. and Biswas-Diener, R. (2010) 'New well-being measures: short scales to assess flourishing and positive and negative feelings', *Social Indicators Research*, Vol. 97, No. 2, pp.143–156, <https://doi.org/10.1007/s11205-009-9493-y>.
- Dogan, T., Totan, T. and Sapmaz, F. (2013) 'The role of self-esteem, psychological well-being, emotional self-efficacy, and affect balance on happiness: a path model', *European Scientific Journal*, Vol. 9, No. 20, pp.31–42.
- Ellis, B. (2018) 'Music learning for fun and wellbeing at any age!', *Australian Journal of Adult Learning*, Vol. 58, No. 1, pp.110–124.
- Fan, X. and Sivo, S.A. (2007) 'Sensitivity of fit indices to model misspecification and model types', *Multivariate Behavioral Research*, Vol. 42, pp.509–529, <https://doi.org/10.1080/00273170701382864>.
- Fredrickson, B.L. and Losada, M.F. (2005) 'Positive affect and the complex dynamics of human flourishing', in *American Psychologist*, Vol. 60, No. 7, pp.678–686, <https://doi.org/10.1037/0003-066X.60.7.678>.
- Giuntoli, L., Ceccarini, F., Sica, C. and Caudek, C. (2017) 'Validation of the Italian versions of the flourishing scale and of the scale of positive and negative experience', *SAGE Open*, Vol. 7, No. 1, <https://doi.org/10.1177/2158244016682293>.
- Harris, G.E. and Cameron, J.E. (2005) 'Multiple dimensions of organizational identification and commitment as predictors of turnover intentions and psychological well-being', *Canadian Journal of Behavioural Science / Revue canadienne des sciences du comportement*, Vol. 37, No. 3, pp.159–169, <https://doi.org/10.1037/h0087253>.
- Hernández, R., Fernández, C. and Baptista, P. (2004) *Metodología de la Investigación [Investigation Methodology]*, McGraw-Hill Interamericana, México.
- Hinton, P.R., McMurray, I. and Brownlow, C. (2014) *Statistics Explained*, McGraw-Hill, México.
- Hone, L.C., Jarden, A. and Schofield, G. (2014) 'Psychometric properties of the flourishing scale in a New Zealand sample', *Social Indicators Research*, Vol. 119, No. 2, pp.1031–1045, <https://doi.org/10.1007/s11205-013-0501-x>.
- Huppert, F.A. (2009) 'Psychological well-being: evidence regarding its causes and consequences', *Applied Psychology: Health and Well-Being*, Vol. 1, No. 2, pp.137–164, <https://doi.org/10.1111/j.1758-0854.2009.01008.x>.



- Huppert, F.A. and So, T.T.C. (2013) 'Flourishing across Europe: application of a new conceptual framework for defining well-being', *Social Indicators Research*, Vol. 110, No. 3, pp.1245–1246, <https://doi.org/10.1007/s11205-012-0030-z>.
- John, O.P., Donahue, E.M. and Kentle, R.L. (1991) 'Big five inventory', in *Journal of Personality and Social Psychology*, APA PsycTests, <https://doi.org/https://doi.org/10.1037/t07550-000>.
- Kaiser, H.F. (1970) 'A second generation little jiffy', *Psychometrika*, Vol. 35, No. 4, pp.401–415, <https://doi.org/10.1007/BF02291817>.
- Kerlinger, F.N. and Lee, H.B. (2004) *Behavior Research. Research Methods in Social Sciences*, McGraw-Hill, México.
- Keyes, C.L.M. (2002) 'The mental health continuum: from languishing to flourishing in life', *Journal of Health and Social Behavior*, Vol. 43, No. 2, pp.207–222, <https://doi.org/10.2307/3090197>.
- Khodarahimi, S. (2013) 'Hope and flourishing in an Iranian adult sample: their contributions to the positive and negative emotions', *Applied Research in Quality of Life*, Vol. 8, pp.361–372, <https://doi.org/https://doi.org/10.1007/s11482-012-9192-8>.
- Kim, J. (2018) 'Validation of Korean well-being scales for university students: flourishing, positive and negative experience', *Korea Journal of Counseling*, Vol. 19, No. 3, pp.51–72.
- Lévy-Mangin, J-P. and Varela-Mallou, J. (2006) *Modelización con estructuras de covarianzas en ciencias sociales: temas esenciales, avanzados y aportaciones especiales [Modeling with Covariance Structures in Social Sciences: Essential, Advanced Topics and Special Contributions]*, Gesbiblo, S.L., Madrid.
- Lorenzo-Seva, U. and Ferrando, P.J. (2006) 'FACTOR: a computer program to fit the exploratory factor analysis model', *Behavior Research Methods*, Vol. 38, No. 1, pp.88–91, <https://doi.org/10.3758/BF03192753>.
- Luszczynska, A., Scholz, U. and Schwarzer, R. (2005) 'The general self-efficacy scale: multicultural validation studies', *Journal of Psychology: Interdisciplinary and Applied*, Vol. 139, No. 5, pp.439–457, <https://doi.org/10.3200/JRLP.139.5.439-457>.
- Martín-Albo, J., Núñez, J.L., Navarro, J.G. and Grijalvo, F. (2007) 'Rosenberg The Spanish Journal of Psychology copyright', *The Spanish Journal of Psychology*, Vol. 10, No. 2, pp.458–467.
- Mata, M.N., Khan, F.H., Khan, K.I., Martins, J.N., Rita, J.M. and Dantas, R.M. (2021) 'Team diversity and project performance: role of trust and absorptive capacity in IT industry', *Academy of Strategic Management Journal*, Vol. 20, No. 2S, pp.1–20.
- Nunnally, J.C. and Bernstein, I.H. (1994) *Psychometric Theory*, Vol. 583, <https://doi.org/10.1037/018882>.
- Perera, M.J., Meade, M.A. and DiPonio, L. (2018) 'Use and psychometric properties of the flourishing scale among adults with spinal cord injury', *Rehabilitation Psychology*, Vol. 63, No. 2, pp.250–257, <https://doi.org/10.1037/rep0000184>.
- Pérez-Moreiras, E. (2020) *La inteligencia y el Coaching energéticos: Una aproximación basada en la evidencia desde la Psicología para el Desarrollo de la Inteligencia Energética (Energetic Intelligence), el Fluir (Flow) y el Florecer (Flourishing) [Energetic Intelligence and Coaching: An evidence-Based Approach from Psychology for the Development of Energetic Intelligence, Flow, and Flourishing]*, Doctoral thesis, Universitat Rovira i Virgili [online] <https://www.tdx.cat/handle/10803/670608> (accessed 6 May 2023).
- Persson, S.S., Blomqvist, K. and Lindström, P.N. (2021) 'Meetings are an important prerequisite for flourishing workplace relationships', *International Journal of Environmental Research and Public Health*, Vol. 18, No. 15, p.8092, <https://doi.org/10.3390/ijerph18158092>.
- Plaisant, O., Courtois, R., Réveillère, C., Mendelsohn, G.A. and John, O.P. (2010) 'Validation par analyse factorielle du Big Five Inventory français (BFI-Fr)', *Analyse convergente avec le NEO-PI-R. Annales Medico-Psychologiques*, Vol. 168, No. 2, pp.97–106, <https://doi.org/10.1016/j.amp.2009.09.003>.

- Pozo-Muñoz, C., Garzón-Umerenkova, A., Bretones-Nieto, B. and Ligia-Charry, C. (2016) 'Psychometric properties and dimensionality of the 'flourishing scale' in Spanish-speaking population', *Electronic Journal of Research in Educational Psychology*, Vol. 14, No. 1, pp.175–192, <https://doi.org/10.14204/ejrep.38.15044>.
- Rautenbach, C. (2015) 'Flourishing of employees in a fast moving consumable goods environment', November [online] <https://repository.nwu.ac.za/handle/10394/17030> (accessed 6 May 2023).
- Rautenbach, C. and Rothmann, S. (2017) 'Antecedents of flourishing at work in a fast-moving consumer goods company', *Journal of Psychology in Africa*, Vol. 27, No. 3, pp.227–234, <https://doi.org/10.1080/14330237.2017.1321846>.
- Redelinghuys, K., Rothmann, S. and Botha, E. (2019) 'Flourishing-at-work: the role of positive organizational practices', *Psychological Reports*, Vol. 122, No. 2, pp.609–631, <https://doi.org/10.1177/0033294118757935>.
- Rosenberg, M. (1965) *Society and the Adolescent Self-Image*, Princeton University, New Jersey.
- Ryan, R.M. and Deci, E.L. (2000) 'Self-determination theory and the facilitation of intrinsic motivation, social development, and well-being', *American Psychologist*, Vol. 55, No. 1, pp.68–78, <https://doi.org/10.1037//0003-066x.55.1.68>.
- Ryan, R.M. and Deci, E.L. (2001) 'To be happy or to be self-fulfilled: a review of research on hedonic and eudaimonic well-being', *Annual Review of Psychology*, Vol. 52, No. 16, pp.141–166.
- Ryan, R.M. and Frederick, C. (1997) 'On energy, personality, and health: subjective vitality as a dynamic reflection of well-being', *Journal of Personality*, Vol. 65, No. 3, pp.529–565, <https://doi.org/10.1111/j.1467-6494.1997.tb00326.x>.
- Ryff, C.D. (1989) 'Happiness is everything, or is it? Explorations on the meaning of psychological well-being', *Journal of Personality and Social Psychology*, Vol. 57, No. 6, pp.1069–1081, <https://doi.org/10.1037/0022-3514.57.6.1069>.
- Ryff, C.D. and Singer, B. (1998) 'The contours of positive human health', *Psychological Inquiry*, Vol. 9, No. 1, pp.1–28, [https://doi.org/10.1207/s15327965pli0901\\_1](https://doi.org/10.1207/s15327965pli0901_1).
- Sanjuán, P., Pérez, A.M. and Bermúdez, J. (2000) 'General self-efficacy scale: psychometric data of adaptation for the Spanish population', *Psicothema*, Vol. 12, pp.509–513, <https://doi.org/ISSN 0214-9915>.
- Schumacker, R.E. (2004) 'A beginner's guide to structural equation modeling', in *A Beginner's Guide to Structural Equation Modeling*, <https://doi.org/10.4324/9781410610904>.
- Schwarzer, R., Bäßler, J., Kwiatek, P., Schröder, K. and Zhang, J.X. (1997) 'The assessment of optimistic self-beliefs: comparison of the German, Spanish, and Chinese versions of the general self-efficacy scale', *Applied Psychology*, Vol. 46, No. 1, pp.69–88, <https://doi.org/10.1111/j.1464-0597.1997.tb01096.x>.
- Silva, A.J. and Caetano, A. (2013) 'Validation of the flourishing scale and scale of positive and negative experience in Portugal', *Social Indicators Research*, Vol. 110, No. 2, pp.469–478, <https://doi.org/10.1007/s11205-011-9938-y>.
- Simons, D.J., Shoda, Y. and Lindsay, D.S. (2017) 'Constraints on generality (COG): a proposed addition to all empirical papers', *Perspectives on Psychological Science*, Vol. 12, No. 6, pp.1123–1128, <https://doi.org/10.1177/1745691617708630>.
- Sumi, K. (2014a) 'Reliability and validity of Japanese versions of the flourishing scale and the scale of positive and negative experience', *Social Indicators Research*, Vol. 118, No. 2, pp.601–615, <https://doi.org/10.1007/s11205-013-0432-6>.
- Sumi, K. (2014b) 'Temporal stability of the Japanese versions of the flourishing scale and the scale of positive and negative experience', *Journal of Psychology & Psychotherapy*, Vol. 4, No. 3, p.140, <https://doi.org/10.4172/2161-0487.1000140>.
- Tang, X., Duan, W., Wang, Z. and Liu, T. (2016) 'Psychometric evaluation of the simplified Chinese version of flourishing scale', *Research on Social Work Practice*, Vol. 26, No. 5, pp.591–599, <https://doi.org/10.1177/1049731514557832>.

- Timmerman, M.E. and Lorenzo-Seva, U. (2011) 'Dimensionality assessment of ordered polytomous items with parallel analysis', *Psychological Methods*, Vol. 16, pp.209–220, <https://doi.org/10.1037/a0023353>.
- Vigil-Colet, A., Morales-Vives, F., Camps, E., Tous, J. and Lorenzo-Seva, U. (2013) 'Development and validation of the overall personality assessment scale (OPERAS)', *Psicothema*, Vol. 25, pp.100–106, <https://doi.org/10.7334/psicothema2011.411>.
- Villieux, A., Sovet, L., Jung, S.C. and Guilbert, L. (2016) 'Psychological flourishing: validation of the French version of the flourishing scale and exploration of its relationships with personality traits', *Personality and Individual Differences*, Vol. 88, pp.1–5, <https://doi.org/10.1016/j.paid.2015.08.027>.
- Zhuang, M., She, Z., Cai, Z., Huang, Z., Xiang, Q., Wang, P. and Zhu, F. (2018) 'Examining a sequential mediation model of Chinese university students' well-being: a career construction perspective', *Frontiers in Psychology*, April, Vol. 9, <https://doi.org/10.3389/fpsyg.2018.00593>.