



Flourishing Scale: Adaptation and Evidence of Validity in a Chilean High School Context

Marcos Carmona-Halty*, Mauricio Marín-Gutierrez, Patricio Mena-Chamorro, Geraldine Sepulveda-Páez and Rodrigo Ferrer-Urbina

Escuela de Psicología y Filosofía, Universidad de Tarapacá, Arica, Chile

OPEN ACCESS

Edited by:

Llewellyn Ellardus Van Zyl,
North West University, South Africa

Reviewed by:

Johannes Alfons Karl,
Victoria University of Wellington,
New Zealand

Jenny Marcionetti,
University of Applied Sciences
and Arts of Southern Switzerland
(SUPSI), Switzerland

*Correspondence:

Marcos Carmona-Halty
mcarmonah@academicos.uta.cl

Specialty section:

This article was submitted to
Positive Psychology,
a section of the journal
Frontiers in Psychology

Received: 15 October 2021

Accepted: 21 February 2022

Published: 31 March 2022

Citation:

Carmona-Halty M,
Marín-Gutierrez M,
Mena-Chamorro P, Sepulveda-Páez G
and Ferrer-Urbina R (2022) Flourishing
Scale: Adaptation and Evidence of
Validity in a Chilean High School
Context. *Front. Psychol.* 13:795452.
doi: 10.3389/fpsyg.2022.795452

This study aimed to adapt the Flourishing Scale to a Chilean high school context and provide evidence of its validity. Data were collected from 1,348 students (52% girls) from three different Chilean schools. The results of confirmatory factor analysis (CFA) supported a one-factor solution, multiple-group CFA supported gender invariance, and structural equation model indicated that the FS is related to positive and negative academic feelings. Overall, the evidence indicates that the Flourishing Scale adapted to the high school context is an instrument that produces valid and reliable scores in our high school Chilean sample.

Keywords: flourishing, psychometric analyses, high school students, Chilean students, gender invariance

INTRODUCTION

Positive education is an emerging area of study aimed at encouraging—without ignoring the negative aspects inherent in all human activity—members of the educational community to flourish and develop their full potential (Jacobs and Renandya, 2019). More specifically, positive education is a discipline that emerges from positive psychology and aims to complement the traditional emphasis on developing academic skills with initiatives to promote well-being and optimal functioning (Seligman et al., 2009). In this line, recent research has shown that the development of personal strengths and resources are potential variables for increasing performance and other desirable outcomes in the high school setting (e.g., Steinmayr et al., 2018; Widlund et al., 2018; Su et al., 2019). In addition, the efficacy of programs aimed at increasing levels of well-being and reducing depressive symptomatology, which favor academic performance, has been confirmed (e.g., Shoshani and Steinmetz, 2013; Shoshani and Slone, 2017; Schoeps et al., 2018).

One of the concepts that has received increasing attention from educational contexts is the so-called *flourishing* (e.g., De la Fuente et al., 2017; Shoshani and Slone, 2017; Datu, 2018; Garzón-Umerenkova et al., 2018; Datu et al., 2019; Chamizo-Nieto et al., 2021; Holliman et al., 2021). Flourishing is synonymous with a high mental well-being level and reflects positive mental health and positive development (Huppert and So, 2013; Hone et al., 2014). More specifically, flourishing is the combination (in a single construct) of feeling good and functioning effectively in one's life. The first refers to feel interest in and a commitment to the activities of daily living, self-confidence, and affect, while the second refers to feeling in control of the course of one's life, having a purpose, and establishing and maintaining positive relationships with others (Ryff and Singer, 1998; Keyes, 2002; Huppert, 2009; Huppert and So, 2013; De la Fuente et al., 2017).

Recent positive education research has shown that flourishing is positively related to desired academic outcomes, such as performance (Datu, 2018), personal resources

(Ouweneel et al., 2011), engagement (Datu, 2018), achievement goal orientation (Datu et al., 2019), adaptability and social support (Holliman et al., 2021), positive teacher–student relationships (Chamizo–Nieto et al., 2021), basic psychological needs (Herrera et al., 2021), and passion for learning (Chen et al., 2021). Conversely, it is negatively related to undesired academic outcomes, such as depression and distress (De la Fuente et al., 2017), procrastination (Garzón–Umerenkova et al., 2018), and psychotic experiences (Oh et al., 2021). Together, these studies show that flourishing is a key construct applicable to the high school context and to the aims of positive education. Therefore, flourishing could help understand the processes underlying the optimal functioning of children and adolescents in school contexts.

One of the most widely used instruments to evaluate flourishing is the Flourishing Scale (FS) developed by Diener et al. (2010). This scale is a brief self-reported measurement that assesses the key components of psychosocial well-being: meaning and purpose in life, supportive and rewarding relationships, engaged and interested, contribute to the well-being of others, competency, self-acceptance, optimism, and being respected (Diener et al., 2009). Initial validation studies support FS as a one-factor solution with adequate psychometric properties (see Diener et al., 2010). More recently, additional validation studies have supported its psychometric properties (e.g., Romano et al., 2020; Martín–Carbonell et al., 2021; Tan et al., 2021) and shown its cross-cultural validity (e.g., Brazil—da Fonseca et al., 2015; China—Lin, 2015; France—Villieux et al., 2016; Egypt—Salama–Younes, 2017; India—Singh et al., 2016; New Zealand—Hone et al., 2014; Russia—Didino et al., 2019).

Despite the contribution that the studies have made to flourishing research, more research efforts are needed, specially, in Spanish-speaking South American countries where minimal research was done to assess the psychometric properties of FS (e.g., Colombia—Martín–Carbonell et al., 2021; Peru—Cassaretto and Martínez Uribe, 2017). The present study attempts to fill the gap on the scarcity of flourishing measures by adapting the FS to the Chilean high school context and examining its psychometric properties. We hope to contribute to increasing the scarce research on positive education in South American countries. More specifically, we aim to adapt the FS to the usual conditions of Chilean high school students and provide evidence of its validity following both a within-network and between-network construct validity. The first refers to assessing reliability, factor structure, and gender invariance, while the second refers to assessing the extent to which flourishing is associated with theoretically related constructs. In this line, given that the FS measures (only) the psychosocial components of well-being, the Scale of Positive and Negative Experiences (SPANE) — developed by Diener et al. (2010)— complements this indicator by measuring a range of positive and negative emotions and feelings in a specific time range (for example, during the past 4 weeks). Accordingly, the FS score has shown positive and negative significant relationships with the positive and negative feelings dimensions of the SPANE, respectively. For example, 0.69 and -0.48 (Giuntoli et al., 2017); 0.67 and -0.47 (Howell and Buro, 2015); and 0.58 and -0.42 (Silva and Caetano, 2013).

Based on the arguments presented, we hypothesize the following: The FS adapted to the high school context will demonstrate adequate psychometric properties in a sample of Chilean high school students. Also, we expect positive and negative relationships between FS scores and study-related positive and negative feelings (measured with the SPANE), respectively.

METHOD

Sample

The sample comprised 1,348 (52% girls) Chilean high school students between grades 7–12 (i.e., 13–18 years old, $M = 15.04$, $SD = 1.43$). The students were from three different secondary schools (each of them hosted approximately 600 students) from two urban centers in the country's northern regions: Arica and Iquique. Of 1,348 students, 17% were 13 years old, 19% were 14 years old, 18% were 15 years old, 21% were 16 years old, 22% were 17 years old, and 3% were 18 years old. In addition, 13% correspond to low, 79% to medium, and 8% to high socioeconomic levels.

Instruments

The *Flourishing Scale* (Diener et al., 2010) is composed of eight-item. Each item is rated by respondents using a 7-point Likert scale (1 = *strongly disagree*, 7 = *strongly agree*). In this study, 3 expert judges were asked to compare both the Spanish and English language version of the FS (available on Ed Diener's website¹) to establish whether both versions did not differ from each other. Furthermore, they checked the instrument's legibility. Subsequently, the FS was adapted to the educational setting of the students following the recommendations described in the literature associated with the adaptation of instruments (see Muñoz et al., 2013; Vallejo–Medina et al., 2017). More specifically, a rewording of the items from the general context to the school context was conducted. For example, “*I am engaged and interested in my daily activities*” was changed to “*I am engaged and interested in my daily school activities*.” Finally, a pilot test was conducted with the FS adapted version (see **Table 1**) where 30 Chilean high school students were encouraged to answer the scale and indicate possible comprehension issues. At this stage, none of the participants expressed problems with understanding the items or the answering format of the FS.

The *Scale of Positive and Negative Experiences* (Diener et al., 2010) is composed of 12 items. Each item is rated by respondents using a 5-point Likert scale (1 = *never*, 5 = *always*). The scale is integrated by two subscales (six items each): positive (e.g., “*I have had pleasant feelings*”) and negative (e.g., “*I have had unpleasant feelings*”) feelings. This study used an adaptation to the Chilean high school context of the original SPANE, which demonstrated adequate psychometric properties (see Carmona–Halty and Villegas–Robertson, 2018). In our sample, internal consistency —for alpha and omega index— was 0.931 and 0.931,

¹<https://eddiener.com>

TABLE 1 | Descriptive and reliability statistics information of the flourishing scale.

| | Descriptive statistics | | | | Reliability statistics | | | CFA factor loadings | S.E. |
|---|------------------------|--------|-------|--------|------------------------|-----------------------------|-----------------------------|---------------------|-------|
| | Mean (SD) | S | K | W | CHI | α if item is dropped | ω if item is dropped | | |
| 1. I lead a purposeful and meaningful school life. | 5.83 (1.359) | -1.187 | 0.977 | 0.811* | 0.631 | 0.850 | 0.852 | 0.744* | 0.015 |
| 2. My social relationships at school are supportive and rewarding. | 5.73 (1.409) | -1.182 | 1.027 | 0.824* | 0.499 | 0.865 | 0.865 | 0.598* | 0.020 |
| 3. I am engaged and interested in my daily school activities. | 5.88 (1.250) | -1.140 | 0.986 | 0.819* | 0.679 | 0.845 | 0.846 | 0.784* | 0.014 |
| 4. At school I actively contribute to the happiness and well-being of others. | 5.81 (1.237) | -1.043 | 0.861 | 0.840* | 0.592 | 0.854 | 0.856 | 0.692* | 0.017 |
| 5. I am competent and capable in school activities that are important to me. | 6.30 (0.972) | -1.667 | 3.151 | 0.722* | 0.607 | 0.853 | 0.854 | 0.748* | 0.017 |
| 6. At school I am a good person and live a good life. | 6.10 (1.124) | -1.512 | 2.592 | 0.770* | 0.663 | 0.847 | 0.848 | 0.769* | 0.014 |
| 7. I am optimistic about my school future. | 6.07 (1.292) | -1.771 | 3.211 | 0.729* | 0.665 | 0.846 | 0.847 | 0.771* | 0.015 |
| 8. People at school respect me. | 5.92 (1.238) | -1.351 | 1.848 | 0.805* | 0.613 | 0.853 | 0.854 | 0.712* | 0.016 |
| Flourishing | 47.68 (7.110) | -19.04 | 16.47 | 0.901* | | | | | |

* $p < 0.001$; SD, standard deviation; S, skewness standardized; K, kurtosis standardized; W, Shapiro-Wilk test; CHI, corrected homogeneity index; CFA, confirmatory factor analysis; and S.E., standard error.

TABLE 2 | Fit Indexes for single-group and multiple-group CFA of the flourishing scale.

| | χ^2 | df | χ^2/df | RMSEA | 90% CI | CFI | TLI | SRMR | CMs | Δ CFI | Δ RMSEA |
|---------------------------|----------|----|-------------|-------|----------------|-------|-------|-------|-------|--------------|----------------|
| Single-group CFA | | | | | | | | | | | |
| M1 One factor solution | 215.24 | 20 | 107.62 | 0.085 | [0.075, 0.096] | 0.976 | 0.967 | 0.024 | - | - | - |
| Multiple-group CFA | | | | | | | | | | | |
| M2 Configural invariance | 261.60 | 40 | 5.415 | 0.091 | [0.080, 0.101] | 0.946 | 0.924 | 0.037 | - | - | - |
| M3 Metric invariance | 278.20 | 47 | 5.919 | 0.085 | [0.076, 0.095] | 0.944 | 0.933 | 0.055 | M2-M3 | 0.002 | 0.006 |
| M4 Scalar invariance | 313.47 | 54 | 5.805 | 0.084 | [0.076, 0.094] | 0.937 | 0.934 | 0.065 | M3-M4 | 0.007 | 0.001 |

χ^2 , Chi-square; df, degree of freedom; RMSEA, root mean square error of approximation; CI, 90% confidence interval; CFI, comparative fit index; TLI, Tucker-Lewis index; SRMR, standardized root mean square residual; and CMs, comparisons between models.

for study-related positive feelings, and for study-related negative feelings was 0.849 and 0.855, respectively.

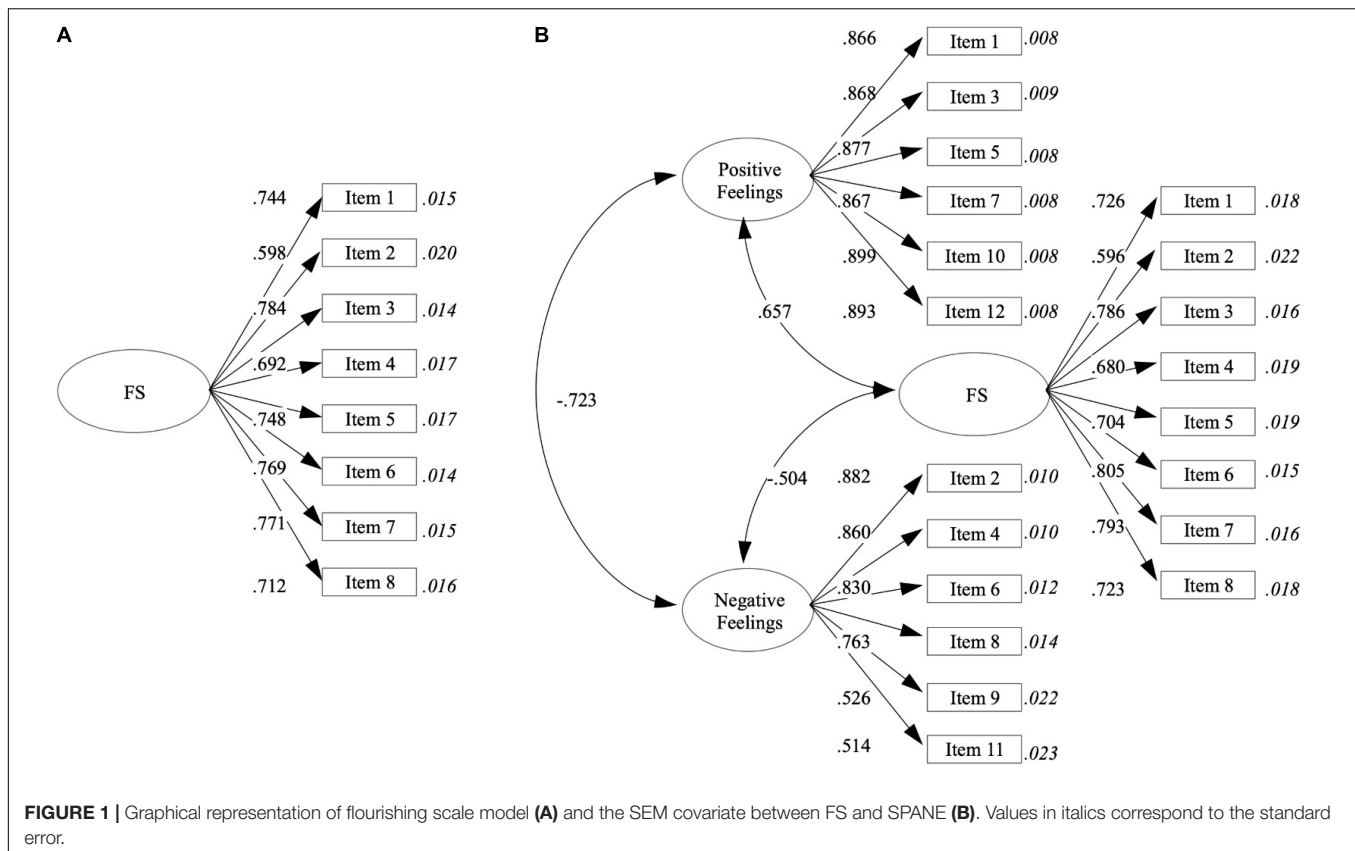
Procedure

The procedure included contacting the principals of schools to explain to them the research's aim, scope, and needs. Once the proposal was accepted, a written authorization was requested from the principals, students, and parents. Data collection was carried out in group sessions of 25 students through an electronic procedure. For this purpose, each student had a computer at their disposal where the questionnaires had been previously uploaded. The students took about 10 min to answer the questionnaire and data collection lasted approximately 3 weeks.

Analysis

Sequential analyses were conducted using Jamovi 1.2 (The Jamovi Project, 2020) and Mplus 8.2 (Muthén and Muthén, 1998/2017). First, mean scores, standard deviation, standardized skewness

and standardized kurtosis, gender differences, and Shapiro-Wilk test were calculated. Second, the internal consistency was estimated using Cronbach's alpha (α) and McDonald's omega (ω) coefficients, the corrected homogeneity index, and the alpha and omega indexes if any of the items were eliminated. Third, to determine whether the model proposed by the FS adequately represents the data collected, a confirmatory factor analysis (CFA) was performed using the weighted least square with mean estimation method (WLSMV) —which is robust to significant deviations from the normal distribution— and the polychoric correlation matrix. The model fit was interpreted according to the cut-off points proposed by Schreiber (2017) (e.g., CFI > 0.95; TLI > 0.95; RMSEA < 0.06). Fourth, to explore gender invariance, a multiple-group CFA was performed, where three levels of equivalence (i.e., configural invariance, metric invariance, and scalar invariance) were evaluated (Chen and West, 2008), using changes in CFI and RMSEA ($\Delta < 0.010$) as criteria to determine whether measurement invariance was established (Cheung and Rensvold, 2002; Chen, 2007;



Dimitrov, 2010). Finally, to examine the criterion validity of the FS, a structural equation model (SEM) was conducted between the covariations of positive and negative feelings and the FS score.

RESULTS

Descriptive Analysis

Table 1 shows the descriptive statistics for the FS at item level, including reliability and factor loading as they emerged in the CFA analysis described below. The Shapiro–Wilk test showed that none of the items had a normal distribution. Following previous research (e.g., Diener et al., 2010), gender differences were considered. However, independent sample *t*-test reveal that there are not statistical significance differences between boys' ($M = 6.015$, $SD = 0.728$) and girls' ($M = 5.929$, $SD = 0.988$) FS scores: $t_{(1346)} = 1.947$, $p > 0.05$.

Within–Network Construct Validation

The FS adapted to the Chilean high school context showed adequate internal consistency for Cronbach's alpha ($\alpha = 0.868$) and McDonald's omega ($\omega = 0.869$) index. In addition, as shown in **Table 1**, the results of the corrected homogeneity index suggests that it is not necessary to delete any items. **Table 2** (M1) and **Figure 1A** shows the CFA results for a model assuming one latent factor underlying all FS items. According to the standards recommended by Schreiber (2017), this model showed adequate

fit index, reflecting a sufficient explanation for the observed covariate matrix. Indeed, the factorial loadings show adequate representations ($\lambda > 0.50$). In addition, the multiple–group CFA shows that the differences in the CFI and RMSEA —across the three invariance models (i.e., configural, metric, and scalar)—were lower than 0.010, which indicates gender invariance.

Between–Network Construct Validation

The SEM model showed satisfactory comparative and absolute fit indexes: $\chi^2(167, 1,348) = 959.437$, $p < 0.05$; CFI = 0.980; TLI = 0.978; RMSEA = 0.059, 90% CI (0.056–0.063). As shown in **Figure 1B**, there are positive ($\gamma = 0.657$, $p < 0.001$) and negative ($\gamma = -0.504$, $p < 0.001$) relationships between FS scores and positive and negative feelings, respectively.

DISCUSSION

The current study aimed to adapt the FS to the Chilean school context and obtain evidence of its validity to address the lack of measures and facilitate flourishing research in educational settings.

Our results are consistent with previous research in terms of the reliability indices and factor structure of the FS (e.g., Diener et al., 2010; Silva and Caetano, 2013; Howell and Buro, 2015; Villieux et al., 2016; Giuntoli et al., 2017; Checa et al., 2018). Also, gender invariance was demonstrated, leading to the conclusion that flourishing can be measured with the same

precision in boys and girls, which is consistent with recent studies (e.g., Romano et al., 2020; Martín–Carbonell et al., 2021; Tan et al., 2021). Furthermore, students who report higher levels of flourishing are more likely to experience study–related positive feelings (e.g., happiness, pleasure, and satisfaction) and less likely to experience study–related negative feelings (e.g., sadness, displeasure, and anger).

The main strength of the present study is the large sample used. However, there are also some limitations that highlighting possible paths for future research. First, we use a convenience sample, and our results should be generalized with caution. Therefore, future research could use a representative and diverse sample to generalize its results to the Chilean high school population. Second, the cross–sectional nature of the design does not allow to prove the temporal stability of the FS. Therefore, future research may include longitudinal designs to analyze their stability and temporal invariance. Third, the use of self–report data may increase the probability of incurring common method variance. Hence, it would be interesting to move toward an external measure of flourishing.

The results suggest that the FS adapted to the Chilean high school context can thus be considered a valid and reliable tool for researchers and practitioners. For researchers, this measure contains only eight items and is, therefore, a short and practical instrument, which offers a broad view of positive and healthy functioning that has been shown to be important for students' optimal functioning. For practitioners, high schools

can take advantage of this measure by including it within their diagnosis and monitoring activities. That is, knowing the state of their student's flourishing will allow them to design and deploy properly grounded actions to foster their well–being and contribute to the building of a healthy and thriving school community.

DATA AVAILABILITY STATEMENT

The raw data supporting the conclusions of this article will be made available by the authors, without undue reservation.

ETHICS STATEMENT

The studies involving human participants were reviewed and approved by the Comité Ético Científico of the Universidad de Tarapacá (CEC-UTA). Written informed consent to participate in this study was provided by the participants' legal guardian/next of kin.

AUTHOR CONTRIBUTIONS

All authors contributed equally to the research design and wrote the manuscript.

REFERENCES

- Carmona–Halty, M., and Villegas–Robertson, J. M. (2018). Scale of positive and negative experience (SPANEX): adaptation and validation in a Chilean school context. *Interciencia* 43, 317–321.
- Cassaretto, M., and Martínez Uribe, P. (2017). Validation of the scales of well–being of flourishing and feelings. *Pensam. Psicol.* 15, 19–31.
- Chamizo–Nieto, M. T., Arrivillaga, C., Rey, L., and Extremera, N. (2021). The role of emotional intelligence, the teacher student–relationship, and flourishing on academic performance in adolescents: a moderated mediation study. *Front. Psychol.* 12:695067. doi: 10.3389/fpsyg.2021.695067
- Checa, I., Perales, J., and Espejo, B. (2018). Spanish validation of the flourishing scale in the general population. *Curr. Psychol.* 37, 949–956. doi: 10.1007/s12144-017-9581-0
- Chen, F. (2007). Sensitivity of goodness of fit indexes to lack of measurement invariance. *Struct. Equ. modeling* 14, 464–504. doi: 10.1080/10705510701301834
- Chen, F. F., and West, S. G. (2008). Measuring individualism and collectivism: the importance of considering differential components, reference groups, and measurement invariance. *J. Res. Pers.* 42, 259–294. doi: 10.1016/j.jrp.2007.05.006
- Chen, X., Vallerand, R. J., and Padilla, A. M. (2021). On the role of passion in second language learning and flourishing. *J. Happiness Stud.* 22, 2761–2779. doi: 10.1007/s10902-020-00339-0
- Cheung, G. W., and Rensvold, R. B. (2002). Evaluating goodness–of–fit indexes for testing measurement invariance. *Struct. Equ. Modeling* 9, 233–255. doi: 10.1207/s15328007sem0902_5
- da Fonseca, P. N., Nascimento, B. S., Macedo Barbosa, L. H. G., Vione, K. C., and Veloso Gouveia, V. (2015). Flourishing scale: evidence of its suitability to the Brazilian context. *Soc. Inq. Well-being* 1, 33–40.
- Datu, J. A. D. (2018). Flourishing is associated with higher academic achievement and engagement in Filipino undergraduate and high school students. *J. Happiness Stud.* 19, 27–39. doi: 10.1007/s10902-016-9805-2
- Datu, J. A. D., Labarda, C. E., and Salanga, M. G. C. (2019). Flourishing is associated with achievement goal orientations and academic delay of gratification in a collectivist context. *J. Happiness Stud.* 21, 1171–1182. doi: 10.1007/s10902-019-00122-w
- De la Fuente, R., Parra, A., and Sánchez–Queija, I. (2017). Flourishing scale and measurement invariance between two samples of Spanish university students. *Eval. Health Prof.* 40, 409–424. doi: 10.1177/0163278717703446
- Didino, D., Taran, E. A., Barysheva, G. A., and Casati, F. (2019). Psychometric evaluation of the Russian version of the flourishing scale in a sample of older adults living in Siberia. *Health Qual. Life Outcomes* 17:34. doi: 10.1186/s12955-019-1100-6
- Diener, E., Wirtz, D., Biswas–Diener, R., Tov, W., Kim–Prieto, C., Choi, D., et al. (2009). “New measures of well–being,” in *Assessing Well–Being: The Collected Works of Ed Diener*, ed. E. Diener (Berlin: Springer), 247–266. doi: 10.1007/978-90-481-2354-4
- Diener, E., Wirtz, D., Kim–Prieto, C., Choi, D., Oishi, S., and Biswas–Diener, R. (2010). New well–being measures: short scales to assess flourishing and positive and negative feelings. *Soc. Indic. Res.* 97, 143–156. doi: 10.1007/s11205-009-9493-y
- Dimitrov, D. M. (2010). Testing for factorial invariance in the context of construct validation. *Meas. Eval. Couns. Dev.* 43, 121–149. doi: 10.1177/0748175610373459
- Garzón–Umerenkova, A., de la Fuente, J., Amate, J., Paoloni, P. V., Fadda, S., and Pérez, J. F. (2018). A linear empirical model of self–regulation on flourishing, health, procrastination, and achievement, among university students. *Front. Psychol.* 9:536. doi: 10.3389/fpsyg.2018.00536
- Giuntoli, L., Ceccarini, F., Sica, C., and Cudek, C. (2017). Validation of the Italian versions of the flourishing scale and of the scale of positive and negative experience. *SAGE Open* 7, 1–12. doi: 10.1177/2158244016682293
- Herrera, D., Matos, L., Gargurevich, R., Lira, B., and Valenzuela, R. (2021). Context matters: teaching styles and basic psychological needs predicting flourishing and perfectionism in university music students. *Front. Psychol.* 12:623312. doi: 10.3389/fpsyg.2021.623312

- Holliman, A. J., Waldeck, D., Jay, B., Murphy, S., Atkinson, E., Collie, R. J., et al. (2021). Adaptability and social support: examining links with psychological wellbeing among UK students and non-students. *Front. Psychol.* 12:636520. doi: 10.3389/fpsyg.2021.636520
- Hone, L., Jarden, A., and Schofield, G. (2014). Psychometric properties of the flourishing scale in a New Zealand sample. *Soc. Indic. Res.* 119, 1031–1045. doi: 10.1007/s11205-013-0501-x
- Howell, A. J., and Buro, K. (2015). Measuring and predicting student well-being: further evidence in support of the flourishing scale and the scale of positive and negative experiences. *Soc. Indic. Res.* 121, 903–915. doi: 10.1007/s11205-014-0663-1
- Huppert, F. A. (2009). Psychological well-being: evidence regarding its causes and consequences. *Appl. Psychol. Health Well-being* 1, 137–164. doi: 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. *Soc. Indic. Res.* 110, 837–861. doi: 10.1007/s11205-012-0030-z
- Jacobs, G. M., and Renandya, W. A. (2019). “Positive education: a new way to look at learning,” in *Student Centered Cooperative Learning: Linking Concepts in Education to Promote Student Learning*, (Berlin: Springer). 99–110. doi: 10.1007/978-981-13-7213-1_8
- Keyes, C. L. M. (2002). The mental health continuum: from languishing to flourishing in life. *J. Health Soc. Behav.* 43, 207–222. doi: 10.2307/3090197
- Lin, C. (2015). Validation of the psychological well-being scale for use in Taiwan. *Soc. Behav. Pers.* 43, 867–874. doi: 10.2224/sbp.2015.43.5.867
- Martín-Carbonell, M., Espejo, B., Checa, I., and Fernández-Daza, M. (2021). Adaptation and measurement invariance by gender of the flourishing scale in a colombian sample. *Int. J. Environ. Res. Public Health* 18:2664. doi: 10.3390/ijerph18052664
- Muñiz, J., Elosua, P., and Hambleton, R. K. (2013). International test commission guidelines for test translation and adaptation: second edition. *Psicothema* 25, 151–157. doi: 10.7334/psicothema2013.24
- Muthén, L.K., and Muthén, B.O (1998/2017). *Mplus User's Guide*, 8th Edn. (Los Angeles, CA: Muthén and Muthén).
- Oh, H., Banawa, R., Zhou, S., Smith, L., and Koyanagi, A. (2021). Flourishing and psychotic experiences among college students in the United States: findings from the healthy minds study 2020. *J. Posit. Psychol.* doi: 10.1080/17439760.2021.1975162 [Epub ahead of print].
- Ouweneel, E., Le Blanc, P. M., and Schaufeli, W. B. (2011). Flourishing students: a longitudinal study on positive emotions, personal resources, and study engagement. *J. Posit. Psychol.* 6, 142–153. doi: 10.1080/17439760.2011.558847
- Romano, I., Ferro, M. A., Patte, K. A., Diener, E., and Leatherdale, S. T. (2020). Measurement invariance of the flourishing scale among a large sample of Canadian adolescents. *Int. J. Environ. Res. Public Health* 17:7800. doi: 10.3390/ijerph17217800
- Ryff, C. D., and Singer, B. (1998). The contours of positive human health. *Psychol. Inq.* 9, 1–28. doi: 10.1207/s15327965pli0901_1
- Salama-Younes, M. (2017). Psychometric properties of the psychological flourishing scale in an Egyptian setting. *J. Psychol. Africa* 27, 310–315. doi: 10.1080/14330237.2017.1347749
- Schoeps, K., Villanueva, L., Prado-Gascó, V. J., and Montoya-Castilla, I. (2018). Development of emotional skills in adolescents to prevent cyberbullying and improve subjective well-being. *Front. Psychol.* 9:2050. doi: 10.3389/fpsyg.2018.02050
- Schreiber, J. B. (2017). Update to core reporting practices in structural equation modeling. *Res. Social Adm. Pharm.* 13, 634–643. doi: 10.1016/j.sapharm.2016.06.006
- Seligman, M. E. P., Ernst, R. M., Gillham, J., Reivich, K., and Linkins, M. (2009). Positive education: positive psychology and classroom interventions. *Oxf. Rev. Educ.* 35, 293–311. doi: 10.1080/03054980902934563
- Shoshani, A., and Slone, M. (2017). Positive education for young children: effects of a positive psychology intervention for preschool children on subjective well-being and learning behaviors. *Front. Psychol.* 8:1866. doi: 10.3389/fpsyg.2017.01866
- Shoshani, A., and Steinmetz, S. (2013). Positive psychology at school: a school-based intervention to promote adolescents' mental health and well-being. *J. Happiness Stud.* 15, 1289–1311. doi: 10.1007/s10902-013-9476-1
- Silva, A. J., and Caetano, A. (2013). Validation of the flourishing scale and scale of positive and negative experiences in Portugal. *Soc. Indic. Res.* 110, 469–478. doi: 10.1007/s11205-011-9938-y
- Singh, K., Junnarkar, M., and Jaswal, S. (2016). Validating the flourishing scale and the scale of positive and negative experience in India. *Ment. Health Relig. Cult.* 19, 943–954. doi: 10.1080/13674676.2016.1229289
- Steinmayr, R., Heyder, A., Naumburg, C., Michels, J., and Wirthwein, L. (2018). School-related and individual predictors of well-being and academic achievement. *Front. Psychol.* 9:2631. doi: 10.3389/fpsyg.2018.02631
- Su, T., Tian, L., and Huebner, E. S. (2019). The reciprocal relations among prosocial behaviour, satisfaction of relatedness needs at school, and subjective well-being in school: a three-wave cross-lagged study among Chinese elementary school students. *Curr. Psychol.* doi: 10.1007/s12144-019-00323-9
- Tan, Q., Zhang, L., Li, W., and Kong, F. (2021). Longitudinal measurement invariance of the flourishing scale in adolescents. *Curr. Psychol.* 40, 5672–5677. doi: 10.1007/s12144-021-01754-z
- The Jamovi Project. (2020). *Jamovi (version 1.8.1) [Computer Software]*. <https://www.jamovi.org>. [accessed April 5, 2021]
- Vallejo-Medina, P., Gómez-Lugo, M., Marchal-Bertrand, L., Saavedra-Roa, A., Soler, F., and Morales, A. (2017). Developing guidelines for adapting questionnaires into the same language in another culture. *Ter. Psicol.* 35, 159–172.
- Villieux, A., Sovet, L., Jung, S., and Guilbert, L. (2016). Psychological flourishing: validation of the French version of the flourishing scale and exploration of its relationship with personality traits. *Pers. Individ. Diff.* 88, 1–5. doi: 10.1016/j.paid.2015.08.027
- Widlund, A., Tuominen, H., and Korhonen, J. (2018). Academic well-being, mathematics performance, and educational aspirations in lower secondary education: changes within a school year. *Front. Psychol.* 9:2027. doi: 10.3389/fpsyg.2018.00297x

Conflict of Interest: The authors declare that the research was conducted in the absence of any commercial or financial relationships that could be construed as a potential conflict of interest.

Publisher's Note: All claims expressed in this article are solely those of the authors and do not necessarily represent those of their affiliated organizations, or those of the publisher, the editors and the reviewers. Any product that may be evaluated in this article, or claim that may be made by its manufacturer, is not guaranteed or endorsed by the publisher.

Copyright © 2022 Carmona-Halty, Marín-Gutierrez, Mena-Chamorro, Sepulveda-Páez and Ferrer-Urbina. This is an open-access article distributed under the terms of the Creative Commons Attribution License (CC BY). The use, distribution or reproduction in other forums is permitted, provided the original author(s) and the copyright owner(s) are credited and that the original publication in this journal is cited, in accordance with accepted academic practice. No use, distribution or reproduction is permitted which does not comply with these terms.