



ORIGINAL RESEARCH PAPER

# The study of character strengths and life satisfaction: A comparison between affective-component and cognitive-component traits<sup>☆</sup>



Ana Blasco-Belled<sup>\*,1</sup>, Carles Alsinet, Cristina Torrelles-Nadal, Agnès Ros-Morente

Universitat de Lleida, Avinguda de l'estudi general n°4, 25001, Lleida, Spain

Received 9 January 2018; accepted 24 October 2018  
Available online 28 November 2018

## KEYWORDS

Character strengths;  
Life satisfaction;  
Wellbeing;  
Heart strengths;  
Mind strengths

**Abstract** Character strengths have been found to be predictive of high levels of life satisfaction. The present study attempts to examine the relationship between these constructs but at a fine-grained level. To that end, we used the heart *versus* mind classification of character strengths (Peterson, 2006), scarcely examined in prior research, to test whether affective-component traits (heart strengths) are more linked to life satisfaction than cognitive-component traits (mind strengths). A sample of 419 undergraduate students completed the measures of character strengths and life satisfaction. Statistical analysis showed that affective-component traits were more predictive of life satisfaction than cognitive-component traits. These findings emphasize the need to devise strength-based interventions aimed at improving life satisfaction, specifically addressing heart character strengths. Implications of these findings for future research are discussed.

© 2018 Universitat de Barcelona. Published by Elsevier España, S.L.U. All rights reserved.

## PALABRAS CLAVE

Fortalezas de carácter;  
Satisfacción vital;  
Bienestar;  
Fortalezas de corazón;  
Fortalezas de mente

**Resumen** La literatura científica demuestra que las fortalezas de carácter predicen altos niveles de satisfacción vital. El presente estudio pretende examinar la relación entre estos 2 constructos, pero de un modo más específico. Para ello, hicimos uso de la clasificación mente *versus* corazón de las fortalezas de carácter (Peterson, 2006), escasamente utilizada en estudios previos, para analizar si los rasgos de componente afectivo (fortalezas de corazón) se relacionan en mayor medida con la satisfacción vital que los rasgos con componente cognitivo (fortalezas de mente). Cuatrocientos diecinueve estudiantes universitarios completaron las 2 medidas requeridas. Los resultados demuestran que los rasgos de componente afectivo predicen la satisfacción vital en mayor medida que los rasgos de componente cognitivo. Este

<sup>☆</sup> "This research article has received a grant for its linguistic revision from the Language Institute of the University of Lleida (2017 call)."

\* Corresponding author.

E-mail address: [ablasco@pip.udl.cat](mailto:ablasco@pip.udl.cat) (A. Blasco-Belled).

<sup>1</sup> Geolocation information: <http://www.innovaciosocial.udl.cat>

hallazgo destaca la necesidad de crear intervenciones basadas en las fortalezas de carácter para mejorar los niveles de satisfacción vital, poniendo especial énfasis en las fortalezas de corazón. Se comentan las implicaciones que suponen para futuras investigaciones en el campo del bienestar.

© 2018 Universitat de Barcelona. Publicado por Elsevier España, S.L.U. Todos los derechos reservados.

## Introduction

In recent decades, empirical research has been interested in the long-standing experience of wellbeing (Keyes, Shmotkin, & Ryff, 2002) focused on two differentiated streams of wellbeing: hedonism and eudaimonia (Ryan & Deci, 2001). Hedonism embodies the search of pleasure and the avoidance of pain and it is represented by subjective wellbeing (SWB), which includes life satisfaction and subjective (Diener, 2000; Ryan & Deci, 2001). Eudaimonia involves the realization of human potentialities and is represented by psychological wellbeing (PWB; Ryff, 1989), which refers to self-acceptance, positive relationships, personal growth, purpose in life, autonomy and environmental mastery (Ryff & Singer, 2008).

Existing research has reported that SWB and PWB are two conceptually differentiated but related constructs (Joshalloo, 2015; Keyes et al., 2002). Affective and cognitive wellbeing are seen as separate constructs in terms of predictors and consequences (Diener, Ng, Harter, & Arora, 2010), despite the vast majority of researchers employing a combination of these measures to examine SWB (Busseri & Sadava, 2011). Veenhoven (2002) suggested that evaluations of life satisfaction entail a reliable measure to assess quality of life and an indicator of wellbeing that should concern policy makers (Layard, 2011). Several discrepancies warn about the validity of life satisfaction as a single indicator of wellbeing, especially concerning the influence of affect in self-ratings (Jayawickreme, Forgeard, & Seligman, 2012; Schwarz & Strack, 1999). However, literature revealed that affect has a relatively small effect on life satisfaction judgments (Eid & Diener, 2004), especially at a within-person level, thus life satisfactions may be considered a relatively stable pattern of wellbeing and quality of life (Jayawickreme, Tsukayama, & Kashdan, 2017).

Positive psychology (Seligman & Csikszentmihalyi, 2000) focuses on the assessment of positive individual differences and interventions to enhance quality of life. Positive individual differences refer to strengths of character, defined as thoughts and behaviors that contribute to wellbeing (Peterson & Seligman, 2004). Peterson and Seligman (2004) elaborated the Values in Action (VIA) classification to describe and identify 24 character strengths within six core virtues (namely wisdom, courage, humanity, justice, temperance and transcendence). Character strengths are the psychological routes to displaying the upper virtues (Peterson & Seligman, 2004). In short, a thriving community must be built through the promotion of character and virtues (Peterson & Park, 2003; Peterson & Seligman, 2004; Peterson, 2006). Within this framework, character strengths can be classified as heart *versus* mind strengths depending on how they relate to each other (Peterson, 2006). On

the one hand, heart strengths include zest, gratitude, hope, love, curiosity, spirituality, humor, appreciation of beauty and excellence, social intelligence, kindness, forgiveness, teamwork, and leadership. On the other hand, mind strengths involve love of learning, creativity, bravery, perspective, perseverance, self-regulation, fairness, modesty, honesty, prudence and judgment.

The idea that character strengths are related to life satisfaction has increasingly attracted attention in research since Seligman (2002) argued that human fulfillment is triggered by the enhancement of one's character strengths. From this perspective, the relationship between character strengths and life satisfaction has been studied, although some discrepancies arise from the use of different measures and distinct conceptualizations (Keyes et al., 2002). Character strengths help prevent the appearance of dysfunctions, alleviate their symptoms and provide empowering strategies for the pursuit of wellbeing (Littman-Ovadia & Lavy, 2012; Peterson & Seligman, 2004). Likewise, updated research has shown that character strengths predicted social support, optimism, self-esteem and self-efficacy (Martínez-Martí & Ruch, 2017). The largest contribution of character strengths concerns life satisfaction and fulfillment (Donaldson, Dollwet, & Rao, 2015; Douglass & Duffy, 2015) even in adolescents (Abasami, Gai, & Wang, 2017; Casas et al., 2013). Specifically, authors agree on a comparatively stable pattern of character strengths that are more associated with life satisfaction, namely hope, zest, gratitude, love, curiosity and humor (Brdar & Kashdan, 2010; Douglass & Duffy, 2015; Hausler et al., 2017; Martínez-Martí & Ruch, 2014; Park & Peterson, 2008; Park, Peterson, & Seligman, 2004; Peterson, Ruch, Beermann, Park, & Seligman, 2007). The character strengths of appreciation of beauty, creativity and modesty seem to be less related to life satisfaction (Park et al., 2004). This relationship has been addressed from an evolutionary perspective, revealing that some character strengths contribute more when life satisfaction is addressed in past, present and future stages of life (Proyer, Gander, Wyss, & Ruch, 2011).

Character strengths-based positive interventions have a significant effect on life satisfaction (Littman-Ovadia & Steger, 2012; Sin & Lyubomirsky, 2009). For instance, being aware of one's signature strengths and using them in new and different ways during a week leads to an increase in life satisfaction (Seligman, 2011; Seligman, Steen, Park, & Peterson, 2005). Within the framework of positive psychology, the effect of the Heart vs Mind character strengths and life satisfaction has barely been addressed, and its relationships with different variables such as life satisfaction remains almost unexplored. Nonetheless, it is known that heart strengths, which help preserve relationships, seem to be more associated with life satisfaction than

mind strengths, which are considered more individualistic (Haridas, Bhullas, & Dunstan, 2017; Park & Peterson, 2008; Park et al., 2004).

### Aims of the study

The aim of the current study is to investigate the association between character strengths and life satisfaction through the mind *versus* heart classification of character strengths (Peterson, 2006). To our knowledge, only the study of Haridas et al. (2017) used this classification to examine how differences in heart *versus* mind character strengths were associated with markers of mental health. According to the literature, we expect positive relationship between character strengths and life satisfaction, more specifically the character strengths of hope, zest, gratitude, curiosity and love (Park et al., 2004). Moreover, we expect heart strengths to be more associated with life satisfaction than mind strengths.

### Methodology

#### Participants

Participants were undergraduate students ( $N=419$ , 80% female) from the University of Lleida. The mean age was 19.9 ( $SD=4.70$ ), ranging from 18 to 60 years old. Demographic information indicated that the typical socioeconomic level was average (0 = significantly lower than average, 5 = significantly higher than average).

#### Measures

**Values in Action Inventory of Strength (VIA-IS):** We used the Spanish version of Azañedo, Fernández-Abascal, and Barraca (2014). This is a self-report questionnaire with 240 items assessing 24 strengths of character. Participants rate each item on a 5-point Likert-scale (1 = very much unlike me, 5 = very much like me). For instance, a sample item to measure the strength of perseverance is "I never quit a task before it is done". The Spanish version of the instrument demonstrated acceptable reliability in the 24 subscales (mean  $\alpha = .81$ ) (Azañedo et al., 2014).

**Satisfaction With Life Scale (SWLS):** We used the Spanish version of Atienza, Pons, Balguer, and García-Mérita (2000). This instrument includes five items that require a response on a 7-point Likert-scale (1 = strongly disagree, 7 = strongly agree). An example item is "so far I have gotten the important things I want in life". The psychometric properties have been explored and accepted (Pavot & Diener, 2008) and the Spanish adaptation shows an internal consistency of .88 (Vázquez, Duque, & Hervás, 2013).

#### Procedure

The participants were first-year students participating in a personal development program offered by the University of Lleida. They filled out the measures of character strengths and life satisfaction via a Google form. The participants obtained an individualized report with their results at the end of the program. We provided an explanation of the study

aims including the terms of confidentiality and anonymity. The participants were extensively informed about the procedure and they signed an informed consent prior to the enrollment on the program, and only those who completed the whole protocol were accepted in the study. The mean time spent completing the survey was around 45 min.

### Data analysis

All statistical analyses were performed using the SPSS package version 24. We first tested the descriptive statistics and the adequacy of the used scales, although measurement approaches were not examined since it was not within the scope of the current study. Afterwards, a multiple regression analysis was carried out in order to determine the predictive power of character strengths (heart *versus* mind) on life satisfaction as well as the explained variance of the relationship for the sake of completeness. To that end, character strengths were used separately as predictor variable while the measure of life satisfaction was used as dependent variable. There were no missing data or outliers.

### Results

#### Descriptive statistics

Table 1 shows the descriptive statistics and reliability estimates of the VIA-IS and SWLS. The alpha reliabilities of

**Table 1** Descriptive statistics for the VIA-IS and the SWLS, and alpha reliabilities for the VIA-IS.

	M	SD	$\alpha$
VIA-IS			
Curiosity	3.88	.53	.78
Love of learning	3.57	.64	.82
Judgment	3.95	.57	.83
Creativity	3.73	.66	.88
Social intelligence	3.98	.51	.79
Perspective	3.74	.53	.79
Bravery	3.86	.58	.81
Perseverance	3.89	.64	.87
Honesty	4.15	.49	.74
Kindness	4.26	.52	.81
Capacity of love	4.13	.56	.76
Teamwork	4.07	.53	.79
Fairness	4.16	.55	.81
Leadership	4.07	.52	.81
Self-regulation	3.52	.61	.73
Prudence	3.50	.63	.78
Appreciation	3.75	.64	.80
Gratitude	4.01	.54	.80
Hope	3.96	.58	.80
Spirituality	2.94	.77	.82
Modesty	3.62	.59	.75
Humor	4.04	.58	.84
Zest	3.74	.57	.81
Forgiveness	3.67	.64	.81
SWLS	5.05	1.2	.85

Note. Appreciation = appreciation of beauty and excellence.

**Table 2** Correlation analysis between character strengths and life satisfaction.

VIA-IS	SWLS
<i>Heart strengths</i>	
Hope	.20**
Gratitude	.18**
Zest	.17**
Capacity of love	.15**
Curiosity	.13*
Leadership	.13*
Social intelligence	.12*
Teamwork	.12*
Kindness	.10
Appreciation	.09
Humor	.07
Spirituality	.03
<i>Mind strengths</i>	
Perseverance	.20**
Bravery	.19**
Honesty	.16**
Fairness	.13*
Love of learning	.11*
Perspective	.11*
Creativity	.08
Judgment	.07
Forgiveness	.07
Self-regulation	.07
Prudence	.04
Humility	.02

Note. Appreciation = appreciation of beauty and excellence; PANAS = Positive and Negative Affect Scale; SWLS = Satisfaction With Life Scale.

\*  $p < .05$ .

\*\*  $p < .01$ .

the VIA-IS subscales ranged from acceptable (*i.e.*, self-regulation,  $\alpha = .73$ ) to good (*i.e.*, creativity,  $\alpha = .88$ ), and the SWLS showed a good internal consistency.

### Relationships between character strengths and wellbeing

Table 2 shows the results of the correlation analysis between character strengths and life satisfaction. The Kolmogorov–Smirnov goodness-of-fit test was used to analyze whether tested variables followed a normal distribution. The results showed that eleven of the 24 VIA-IS subscales (*i.e.*, honesty, kindness, love, teamwork, fairness, leadership, appreciation of beauty and excellence, gratitude, spirituality, humor, and zest) followed a non-normal distribution, thus Spearman's rho correlation coefficient was calculated. Out of the 24 character strengths, 14 correlated significantly with life satisfaction: overall, heart strengths correlated more to life satisfaction (*i.e.*, hope, gratitude, zest, love, curiosity, leadership, social intelligence and teamwork) than mind strengths (*i.e.*, perseverance, bravery, honesty, fairness, love of learning and perspective).

Table 3 shows the results of the regression analyses. Fourteen regression models were specified, each for the 14 correlated character strengths, since the pur-

**Table 3** Summary of multiple regression analysis of the 24-VIA subscales predicting SWLS.

Character strengths	<i>B</i>	SE( <i>B</i> )	$\beta$	$R^2$
<i>Heart strengths</i>				
Hope	.34***	.09	.20	.04
Gratitude	.32***	.09	.18	.03
Zest	.30***	.09	.17	.03
Love	.26**	.09	.15	.02
Leadership	.24*	.10	.13	.02
Curiosity	.23*	.10	.13	.02
Teamwork	.23*	.09	.12	.02
Social intelligence	.22*	.10	.12	.01
<i>Mind strengths</i>				
Bravery	.33***	.09	.19	.04
Perseverance	.32***	.08	.20	.04
Honesty	.32**	.10	.16	.03
Love of learning	.18**	.08	.142	.01
Fairness	.23*	.09	.13	.02
Perspective	.20*	.10	.11	.01

Note. Appreciation = appreciation of beauty and excellence.

\*  $p < .05$ .

\*\*  $p < .01$ .

\*\*\*  $p < .001$ .

pose of the current study was to examine the predictive power of each of the character strengths independently on life satisfaction. All correlated character strengths were introduced as independent variables and life satisfaction was introduced as dependent variable. All tested models predicted positively life satisfaction, specifically the character strengths of hope, bravery, perseverance, honesty and gratitude. Although it is worth mentioning the low explained variance of the tested models (4% as most), this may be due to the each model included a single independent and dependent variable. Hence, this would not represent the explained variance of the all heart or mind character strengths, but the predictive power of single character strengths. By and large, heart strengths were slightly more predictive of life satisfaction than mind strengths.

### Discussion

The aim of the current study was to explore the relationship between character strengths and life satisfaction through the heart *versus* mind classification of character strengths (Peterson, 2006). Generally, we expected character strengths to predict life satisfaction and, moreover, heart strengths to relate more with life satisfaction than mind strengths. The results supported our hypothesis, which is in accordance with previous research (*e.g.*, Haridas et al., 2017; Peterson, 2006). Across prior studies, the five character strengths most associated with life satisfaction were curiosity, gratitude, hope, love and zest (Brdar & Kashdan, 2010; Douglass & Duffy, 2015; Hausler et al., 2017; Martínez-Martí & Ruch, 2014; Park & Peterson, 2008; Park et al., 2004; Peterson et al., 2007). This pattern was almost replicated in the present study, including curiosity, hope, love, and zest, despite the low explanatory weight of the most predictive character strengths requires consideration. We further

found perseverance, bravery, spirituality, honesty, and love of learning as significantly positively correlated.

Whether the nature of character strengths (heart *versus* mind) adds predictive information about this relationship should shed light into the study of character strengths and wellbeing. In agreement with prior research (Haridas et al., 2017) our study revealed a tendency of heart strengths to relate more with life satisfaction than mind strengths. These may be due to the prevalent educational background of the participants in our data, who were engaged in studies related to assistance to people (*i.e.*, psychology, social education, social work). Yet we should remark the contribution of mind strengths to life satisfaction, although to a lesser extent. Since the university framework encourages students toward a brighter future based on academic achievements, cognitive dimensions would be more pursued and thus character strengths involving self-enhancement would be more attained.

The character strength of perseverance was previously found to be associated with life satisfaction in other studies in a German (Ruch et al., 2010) and Swiss sample (Peterson et al., 2007). Conversely, love of learning appeared to contribute to low levels of life satisfaction in previous studies (Park et al., 2004) as well as spirituality (Martínez-Martí & Ruch, 2014). All in all, the display of character strengths yields to a sense of subjective happiness (Diener, 2000) that is emphasized when such strengths involve an affective-component trait (heart strengths). While life satisfaction defines the cognitive aspect of SWB, the affective component of SWB may be articulated through heart strengths, which contribute more to a feeling of being satisfied with one's life. This assumption is embodied within the academic discussion about the role of affection and cognition in the measurement of wellbeing (Eid & Diener, 2004). Considering life satisfaction as a reliable indicator of general wellbeing (Jayawickreme et al., 2017; Veenhoven, 2002), the effects of character strengths may be influenced by the affective or cognitive nature of these traits. To sum, the present study provides evidence to emphasize the need of strength-based interventions to improve life satisfaction (Park et al., 2004; Proyer et al., 2011), specifically concerning positive affective-component traits, such as heart character strengths.

## Limitations

The present study has several limitations to be acknowledged. First, the main constraint of this study is the representativeness of the sample. It was comprised of undergraduate students and it was imbalanced in terms of gender (mainly women). Previous research has demonstrated existing gender differences in the relationship with life satisfaction (Brdar, Anić, & Rijavec, 2011). Cummins (2003) argued that data from students hardly represent the general population results, even reporting lower levels of life satisfaction (Cummins, 2003). This may give rise to improvements in the representativeness of Spanish samples used in further research to explore the relationship between character strengths and life satisfaction. Thus, the results of the present study must be taken with caution. Second, although life satisfaction is a reliable indicator of wellbeing,

several researchers warn that it may perform an incomplete assessment of progression and development (Forgeard et al., 2011; Jayawickreme et al., 2012). In order to capture a trustworthy conception of wellbeing, Forgeard, Jayawickreme, Kern, & Seligman (2011) suggested adding measures of flourishing and healthy development, emphasizing that life satisfaction judgments are not steadily influenced by affection. Third, further studies should consider the value of stressing the importance that personal resources, such as character strengths, have in psychosocial interventions aimed at enhancing quality of life. More specifically, we suggest the need for longitudinal studies to track the measures of interest regularly in order to analyze the causal mechanisms between the dimensions of character strengths and life satisfaction. For example, prospective studies with a control and experimental groups could be helpful to establish the causes of wellbeing and to examine changes over time.

## Conflict of interest

No potential conflict of interest was reported by the authors.

## References

- Abasimi, E., Gai, X., & Wang, G. (2017). Character strengths and life satisfaction of high school students. *International Journal of Applied Psychology*, 7(2), 36–43. <http://dx.doi.org/10.5923/j.ijap.20170702.02>
- Atienza, F. L., Pons, D., Balaguer, I., & García-Merita, M. L. (2000). Psychometric properties of the Satisfaction with Life Scale in adolescents. *Psicothema*, 12, 314–319. [http://dx.doi.org/10.1016/S0191-8869\(02\)00332-X](http://dx.doi.org/10.1016/S0191-8869(02)00332-X)
- Azañedo, C. M., Fernández-Abascal, E. G., & Barraca, J. (2014). Character strengths in Spain: Validation of the Values in Action Inventory of Strengths (VIA-IS) in a Spanish sample. *Clinica y Salud*, 25(2), 123–130. <http://dx.doi.org/10.1016/j.clysa.2014.06.002>
- Brdar, I., & Kroshdan, T. B. (2010). Character strengths and wellbeing in Croatia: An empirical investigation of structure and correlates. *Journal of Research in Personality*, 44(1), 151–154. <http://dx.doi.org/10.1016/j.jrp.2009.12.001>
- Brdar, I., Anić, P., & Rijavec, M. (2011). *Character strengths and well-being: Are there gender differences? The human pursuit of well-being*. pp. 145–156. Netherlands: Springer.
- Busseri, M. A., & Sadava, S. W. (2011). A review of the tripartite structure of subjective well-being: Implications for conceptualization, operationalization, analysis, and synthesis. *Personality and social psychology review*, 15(3), 290–314. <http://dx.doi.org/10.1177/1088868310391271>
- Casas, F., Fernández-Artamendi, S., Montserrat, C., Bravo, A., Bertrán, I., & Valle, J. F. D. (2013). El bienestar subjetivo en la adolescencia: Estudio comparativo de dos Comunidades Autónomas en España. *Anales de Psicología*, 29(1), 148–158. <http://dx.doi.org/10.6018/analesps.29.1.145281>
- Cummins, R. A. (2003). Normative life satisfaction: Measurement issues and a homeostatic model. *Social Indicators Research*, 64(2), 225–256. <http://dx.doi.org/10.1023/A:1024712527648>
- Diener, E. (2000). Subjective well-being: The science of happiness and a proposal for a national index. *American Psychologist*, 55(1), 34. <http://dx.doi.org/10.1037/0003-066X.55.1.34>
- Diener, E., Ng, W., Harter, J., & Arora, R. (2010). Wealth and happiness across the world: Material prosperity predicts life evaluation, whereas psychosocial prosperity predicts positive

- feeling. *Journal of personality and social psychology*, 99(1), 52. <http://dx.doi.org/10.1037/a0018066>
- Donaldson, S. I., Dollwet, M., & Rao, M. A. (2015). Happiness, excellence, and optimal human functioning revisited: Examining the peer-reviewed literature linked to positive psychology. *Journal of Positive Psychology*, 10(3), 185–195. <http://dx.doi.org/10.1080/17439760.2014.943801>
- Douglass, R. P., & Duffy, R. D. (2015). Strengths use and life satisfaction: A moderated mediation approach. *Journal of Happiness Studies*, 16(3), 619–632. <http://dx.doi.org/10.1007/s10902-014-9525-4>
- Eid, M., & Diener, E. (2004). Global judgments of subjective well-being: Situational variability and long-term stability. *Social indicators research*, 65(3), 245–277. doi:B:SOCI.0000003801.89195.bc.
- Forgeard, M. J. C., Jayawickreme, E., Kern, M. L., & Seligman, M. E. P. (2011). Doing the right thing: Measuring wellbeing for public policy. *International Journal of Wellbeing*, 1(1), 79–106. <http://dx.doi.org/10.5502/ijw.v1i1.15>
- Haridas, S., Bhullar, N., & Dunstan, D. A. (2017). What's in character strengths? Profiling strengths of the heart and mind in a community sample. *Personality and Individual Differences*, 113, 32–37. [http://dx.doi.org/10.1007/978-94-007-1375-8\\_13](http://dx.doi.org/10.1007/978-94-007-1375-8_13)
- Hausler, M., Strecker, C., Huber, A., Brenner, M., Höge, T., & Höfer, S. (2017). Distinguishing relational aspects of character strengths with subjective and psychological well-being. *Frontiers in Psychology*, 8, 1159. <http://dx.doi.org/10.3389/fpsyg.2017.01159>
- Jayawickreme, E., Forgeard, M. J. C., & Seligman, M. E. P. (2012). The engine of well-being. *Review of General Psychology*, 16(4), 327–342. <http://dx.doi.org/10.1037/a0027990>
- Jayawickreme, E., Tsukayama, E., & Kashdan, T. B. (2017). Examining the effect of affect on life satisfaction judgments: A within-person perspective. *Journal of Research in Personality*, 68, 32–37. <http://dx.doi.org/10.1016/j.jrp.2017.04.005>
- Joshanloo, M. (2016). Revisiting the empirical distinction between hedonic and eudaimonic aspects of well-being using exploratory structural equation modeling. *Journal of Happiness Studies*, 17(5), 2023–2036. <http://dx.doi.org/10.1007/s10902-015-9683-z>
- Keyes, C. L. M., Shmotkin, D., & Ryff, C. D. (2002). Optimizing well-being: The empirical encounter of two traditions. *Journal of Personality and Social Psychology*, 82, 1007–1022. <http://dx.doi.org/10.1037/0022-3514.82.6.1007>
- Layard, R. (2011). *Happiness: Lessons from a new science*. London, UK: Penguin.
- Littman-Ovadia, H., & Lavy, S. (2012). Differential ratings and associations with well-being of character strengths in two communities. *Health Sociology Review*, 21(3), 299–312. <http://dx.doi.org/10.5172/hesr.2012.21.3.299>
- Littman-Ovadia, H., & Steger, M. (2012). Character strengths in Israel: Hebrew adaptation of the VIA inventory of strengths. *European Journal of Psychological Assessment*, 28, 41–50. <http://dx.doi.org/10.1027/1015-5759/a000089>
- Martínez-Martí, M. L., & Ruch, W. (2014). Character strengths and well-being across the life span: Data from a representative sample of German-speaking adults living in Switzerland. *Frontiers in Psychology*, 5, 1253. <http://dx.doi.org/10.3389/fpsyg.2014.01253>
- Martínez-Martí, M. L., & Ruch, W. (2017). Character strengths predict resilience over and above positive affect, self-efficacy, optimism, social support, self-esteem, and life satisfaction. *Journal of Positive Psychology*, 12(2), 110–119. <http://dx.doi.org/10.1080/17439760.2016.1163403>
- Park, N., & Peterson, C. (2008). Positive psychology and character strengths: Application to strengths-based school counseling. *Professional School Counseling*, 12(2), 85–92. <http://dx.doi.org/10.5330/PSC.n.2010-12.85>
- Park, N., Peterson, C., & Seligman, M. E. P. (2004). Strengths of character and well-being. *Journal of Social and Clinical Psychology*, 23, 603–619. <http://dx.doi.org/10.1521/jscp.23.5.603.50748>
- Pavot, W., & Diener, E. (2008). The Satisfaction with Life Scale and the emerging construct of life satisfaction. *Journal of Positive Psychology*, 3, 137–152. <http://dx.doi.org/10.1080/17439760701756946>
- Peterson, C. (2006). *A primer in positive psychology*. New York: Oxford University Press.
- Peterson, C., & Park, N. (2003). Positive psychology as the even-handed positive psychologist views it. *Psychological Inquiry*, 14, 141–146.
- Peterson, C., & Seligman, M. E. P. (2004). *Character strengths and virtues: A handbook and classification*. Washington, DC: American Psychological Association.
- Peterson, C., Ruch, W., Beermann, U., Park, N., & Seligman, M. E. P. (2007). Strengths of character, orientations to happiness, and life satisfaction. *Journal of Positive Psychology*, 2(3), 149–156. <http://dx.doi.org/10.1080/17439760701228938>
- Proyer, R. T., Gander, F., Wyss, T., & Ruch, W. (2011). The relation of character strengths to past, present, and future life satisfaction among German-Speaking women. *Applied Psychology: Health and Well-Being*, 3(3), 370–384. <http://dx.doi.org/10.1111/j.1758-0854.2011.01060.x>
- Ruch, W., Proyer, R. T., Harzer, C., Park, N., Peterson, C., & Seligman, M. E. P. (2010). Values in action inventory of strengths (VIA-IS): Adaptation and validation of the German version and the development of a peer-rating form. *Journal of Individual Differences*, 31(3), 138–149. <http://dx.doi.org/10.1027/1614-0001/a000022>
- Ryan, R. M., & Deci, E. L. (2001). On happiness and human potentials: A review of research on hedonic and eudaimonic well-being. *Annual Review of Psychology*, 52(1), 141–166. <http://dx.doi.org/10.1146/annurev.psych.52.1.141>
- Ryff, C. D. (1989). Happiness is everything, or is it? Explorations on the meaning of psychological well-being. *Journal of Personality and Social Psychology*, 57(6), 1069. <http://dx.doi.org/10.1037/0022-3514.57.6.1069>
- Ryff, C. D., & Singer, B. (2008). Know thyself and become what you are: A eudaimonic approach to psychological well-being. *Journal of Happiness Studies*, 9, 13–39. <http://dx.doi.org/10.1007/s10902-006-9019-0>
- Schwarz, N., & Strack, F. (1999). Reports of subjective well-being: Judgmental processes and their methodological implications. *Well-being: The foundations of hedonic psychology*, 7, 61–84.
- Seligman, M. E. P. (2002). Positive psychology, positive prevention, and positive therapy. In C. R. Snyder, & S. J. Lopez (Eds.), *Handbook of positive psychology* (pp. 3–9). New York: Oxford University Press.
- Seligman, M. E., Steen, T. A., Park, N., & Peterson, C. (2005). Positive psychology progress: empirical validation of interventions. *American psychologist*, 60(5), 410. <http://dx.doi.org/10.1037/0003-066X.60.5.410>
- Seligman, M. E. P., & Csikszentmihalyi, M. (2000). Positive psychology: An introduction. *American Psychologist*, 55(1), 5–14. <http://dx.doi.org/10.1037//0003-066X.55.1.5>
- Sin, N. L., & Lyubomirsky, S. (2009). Enhancing well-being and alleviating depressive symptoms with positive psychology interventions: A practice-friendly meta-analysis. *Journal of Clinical Psychology*, 65(5), 467–487. <http://dx.doi.org/10.1002/jclp.20593>
- Vázquez, C., Duque, A., & Hervás, G. (2013). Satisfaction with life scale in a representative sample of Spanish adults: Validation and normative data. *Spanish Journal of Psychology*, 16(e82), 1–15. <http://dx.doi.org/10.1017/sjp.2013.82>
- Veenhoven, R. (2002). Why social policy needs subjective indicators. *Social indicators research*, 58(1–3), 33–46. [http://dx.doi.org/10.1007/0-306-47513-8\\_3](http://dx.doi.org/10.1007/0-306-47513-8_3)