

Values in Action Inventory of Strengths (VIA-IS): Adaptation and validation of the Iranian version and the development of a peer-rating form

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Abstract

Aim: This study examined the psychometric properties and factorial structure of the Persian (Farsi) version of the VIA-IS-120 in an Iranian population.

Methods: Two independent samples of university students participated (Study 1: n = 309; Study 2: n = 271; age range = 18–57 years), recruited via convenience sampling. Internal consistency, gender and age differences, and convergent and divergent validity were examined using correlations with the Big Five personality traits, positive and negative affect, life satisfaction, and components of well-being. Exploratory factor analysis (EFA) was conducted in Study 1, followed by confirmatory factor analysis (CFA) in Study 2.

Results: Most character strengths showed moderate internal consistency ($\alpha = .49-.77$), with humility demonstrating lower reliability in Study 1. Gratitude was the only strength positively associated with age, and men scored higher than women on bravery, humor, and vitality. All character strengths correlated positively with positive affect and well-being indicators, supporting the convergent validity of these measures. Creativity, bravery, hope, curiosity, and vitality showed the strongest associations with positive affect, while hope, love, humor, and vitality were positively related to life satisfaction. Ten strengths demonstrated significant negative correlations with negative affect, supporting divergent validity. Associations with the Big Five were generally consistent with theoretical expectations but modest in magnitude. EFA supported a four-factor structure—courage, humanity, wisdom, and transcendence. CFA indicated that this four-factor model demonstrated superior parsimony compared to the original six-factor model.

Conclusion: The findings support the construct validity and cross-cultural applicability of the Persian VIA-IS-120.

Keywords: Character strengths, Factor analysis, Positive psychology, VIA-IS, Validity.

Keypoints:

- All character strengths had positive and significant correlation with wellbeing elements
- All character strengths had positive and significant correlation with positive affect
- Both exploratory and confirmatory factor analyses confirmed four dimensional model of VIA-IS-120

Introduction

Positive psychology focuses on the scientific study of human strengths and positive functioning, with the goal of enhancing wellbeing rather than merely alleviating psychopathology (Carr, 2013; Seligman, 2011). Within this framework, character strengths have been proposed as core psychological capacities that contribute to optimal functioning, life satisfaction, and wellbeing. A central challenge in positive psychology is the valid and culturally appropriate measurement of these strengths, particularly across non-Western contexts.

To address the need for a common scientific language for human strengths, Peterson (2004) developed the Values in Action (VIA) Classification of Character Strengths and Virtues (CSV). This classification identifies 24 character strengths organized under six broad virtues (Wisdom, Courage, Humanity, Justice, Temperance, and Transcendence). Character strengths are conceptualized as morally valued, measurable, and relatively stable psychological capacities that manifest in thoughts, emotions, and behaviors. Unlike earlier humanistic approaches, the VIA framework is explicitly grounded in empirical validation and psychometric assessment, making character strengths a legitimate subject of scientific inquiry.

There are three versions of VIA-IS with 240, 120, and 72 items. Psychometric properties for all versions of VIA-IS are good, with Cronbach's alpha more than .7 (Diener et al., 1985; Diener et al., 2010; Linley et al., 2007; Peterson, 2004). However, findings regarding its internal factor structure have been inconsistent, with studies supporting one-, four-, five-, or six-factor solutions (Azañedo et al., 2017; Brdar & Kashdan, 2010; Littman-Ovadia & Lavy, 2011). These inconsistencies highlight the importance of cultural context in shaping the structure and expression of character strengths and underscore the necessity of local validation rather than direct adoption of Western-developed models.

From a theoretical perspective, character strengths are assumed to play a central role in wellbeing. Early positive psychology models emphasized subjective wellbeing, defined by life satisfaction (Seligman, 2004). More recently, Seligman (2011) proposed the PERMA model, conceptualizing wellbeing as a multidimensional construct consisting of Positive Emotions, Engagement, Positive Relationships, Meaning, and Accomplishment. Although character strengths are theoretically assumed to contribute to all elements of wellbeing, empirical research has shown that some strengths—particularly hope, zest, gratitude, curiosity, and love—are more strongly associated with life satisfaction and positive affect than others (Buschor et al., 2013; Martínez-Martí & Ruch, 2014; Weber et al., 2013). Despite these findings, no study to date has

systematically examined the relationship between character strengths and wellbeing using the PERMA framework, representing a clear gap in the literature. We also want to examine the divergent validity of VIA-120 through a hypothesized negative relationship between negative affect and character strengths.

In addition to wellbeing, Peterson (2004) proposed a conceptual correspondence between character strengths and the Big Five personality traits, while maintaining that strengths are morally valued and theoretically distinct from personality dimensions. He hypothesized that neuroticism had no corresponding character strengths. Extroversion

was associated with vitality and humor. Openness to experience was conceptually associated with curiosity, creativity, and appreciation of beauty. Agreeableness has characteristics related to kindness and gratitude, and finally, conscientiousness was associated with self-regulation and persistence. Empirical evidence supporting this assumption remains limited, with only one study directly testing these relationships (Littman-Ovadia & Lavy, 2011). Replication in another population is therefore needed to strengthen the theoretical validity of the VIA framework.

Demographic correlates of character strengths, such as age and gender differences, have also been examined, but findings remain inconsistent across cultures. While some studies report age-related increases in certain strengths (e.g., gratitude, spirituality), others report negative or nonsignificant associations (Martínez-Martí & Ruch, 2014; Ruch et al., 2010). Similarly, gender differences have been reported inconsistently, suggesting possible cultural moderation effects (Linley et al., 2007; Littman-Ovadia & Lavy, 2011).

Despite the growing international use of the VIA-IS, no validated Persian (Farsi) version of the VIA-120 exists, and no study has examined its factorial structure within an Iranian population using both exploratory and confirmatory approaches. The absence of culturally validated instruments limits the generalizability of positive psychology research and hampers theory development in non-Western contexts. Given cultural differences in moral values, social norms, and expressions of virtue, validation of the VIA-IS (120) in Iranian population is both theoretically and methodologically necessary. Based on prior theoretical and empirical work, it was hypothesized that:

- a) all character strengths would demonstrate adequate internal consistency;
- b) hope, love, gratitude, curiosity, and zest would show stronger positive associations with life satisfaction and positive affect than other strengths;
- c) character strengths would be positively associated with most PERMA elements, particularly positive emotions, relationships, meaning, and accomplishment;
- d) character strengths would show theoretically coherent associations with Big Five personality traits.

No directional hypotheses were formulated regarding age, gender, or the optimal dimensional structure of the VIA-IS, given inconsistencies in previous findings across cultures.

Methodology

Participants

Both samples exceeded commonly recommended minimum sample sizes for factor analysis and structural equation modeling studies, which generally suggest a minimum of 200 participants for stable parameter estimation (Kline, 2016). The sample in study 1 consisted of 309 volunteer students of all universities in the city of Neyshabur (located in the north-east of Iran). Their mean age was 22.15 in our sample, 79.6% of the participants were single, 19.7% were married, and the rest (0.6%) were separated or divorced. 15.9% of the sample had an associate degree, 79.3% had BSc or BA, and 4.9% had MSc. 23.9% of participants were male, and 76.1% were female. In the second study, 271 university students (68.3% women) from the city of Mashhad participated. The majority of the

students were pursuing undergraduate degrees (67.2%), while 32.8% were postgraduate students.

Measures

All participants completed the VIA-IS-120 in both studies. In Study 1, we used four other measures, including the Positive Affect and Negative Affect Schedule, the Satisfaction with Life Scale (SWLS), BFI-S (15 items), and the Human Flourishing Questionnaire (HFQ).

Values in Action-Inventory of Strengths (VIA-IS-120). It is a self-report questionnaire developed by (Peterson, 2004) to investigate 24 character strengths. Items are rated on a Likert scale ranging from 1 (not at all like me) to 5 (very much like me). It has three versions of 240, 120, and 73 items. The version with 120 items was used in the present study. There are five items for each of the 24 character strengths in this version. Average scores were used to compute character strengths. Different studies found good reliability and validity for this inventory (McGrath, 2015). One study demonstrated that alpha coefficients for all subscales of VIA-IS-120 were more than .69 (Littman-Ovadia & Lavy, 2011). This inventory has not been validated in an Iranian population before.

Positive Affect and Negative Affect Schedule (PANAS). Watson et al. (1988) developed the Positive Affect and Negative Affect Schedule (PANAS) questionnaire to assess the effective structure. Positive affect (PA) is associated with feelings of enthusiasm, activeness, and alertness. Negative affect (NA) is associated with subjective distress and unpleasant feeling like disgust, anger, and sadness. This scale has twenty items (ten items for each scale). They are rated on a Likert scale ranging from 1 (very slightly or not at all) through 5 (extremely). The mean scores for each scale are calculated separately. The validity and reliability of PANAS were good in previous research (Crawford & Henry, 2004). This questionnaire was also translated and validated in the Iranian population (Bakhsipour & Dezhkam, 2006). In the present study, alpha coefficients for positive and negative affect were .78 and .75 subsequently.

Satisfaction with Life Scale (SWLS). It is used to assess the cognitive component of wellbeing. It is a 5-items scale developed by Diener et al. (1985). Respondents rate their

agreements with each item on a Likert scale ranging from 1 (strongly disagree) to 5 (strongly agree). Different studies demonstrated good reliability and validity for the scale (Blais et al., 1989; Gouveia et al., 2009; Lewis et al., 1995). This questionnaire has been translated and validated in the Iranian population (SHEIKHI et al., 2011). The SWLS demonstrated good reliability ($\alpha = .83$) in the first study of present research.

BFI-S (15 items). Lang et al. (2011) developed the BFI-S (15 items) as a short form to assess personality traits. Costa and McCrae (1985) proposed five personality traits, including extraversion, neuroticism, openness to experience, conscientiousness, and agreeableness. Fifteen items of this questionnaire are ranked from 1 (strongly disagree) to 5 (strongly agree). The BFI-S has demonstrated good reliability and validity in previous

research (Lang et al., 2011). It has been translated and validated in the Iranian population. The BFI-S demonstrated moderate reliability in the first study of present research.

Human Flourishing Questionnaire (HFQ). It is a self-report questionnaire developed by Soleimani et al. (2015) Soleimani et al. (2015) Soleimani et al. (2015) Soleimani et al. (2015) to assess wellbeing based on PERMA elements (including positive emotions, engagement, positive relations, meaningfulness, and accomplishment). The scale of engagement was removed in a preliminary study due to low factor loading. HFQ has 28 items and four scales. Soleimani et al. (2015) reported good internal consistencies for scales of positive emotions ($\alpha = .91$), positive relationship ($\alpha = .91$), meaningfulness ($\alpha = .91$), and accomplishment ($\alpha = .91$). Alpha coefficients for all subscales in the first study of present research were .72 to .86.

Procedure

In both studies, the Persian version of the VIA-IS-120 was administered. Content validity is primarily a concern during the initial development of an instrument and is typically established through expert judgment rather than statistical analysis (Haynes et al., 1995). Because the VIA-IS is a well-established, theory-driven measure developed through extensive cross-cultural literature review and expert consensus, content validity was not re-evaluated in the present study.

Instead, the focus of the adaptation process was on ensuring cultural and linguistic equivalence, rather than redefining the content domain of the construct. This was achieved through a standardized translation and back-translation procedure and expert review, with no modifications to the original item content. The Persian translation used in the present study has also been employed in previous research (Namdari et al., 2009), supporting its appropriateness for use in Iranian samples. All participants signed the consent form based on the ethical codes of the Ferdowsi University of Mashhad, Iran. SPSS-23 and AMOS-24 were used to analyze the data.

Data Analysis and Outlier treatment

Prior to the main analyses, the psychometric properties of the Persian version of the VIA-IS were examined in a pilot study ($n = 60$) to ensure item clarity and preliminary reliability. Participants in both studies completed a battery of self-report questionnaires using paper-and-pencil methods, with an average completion time of approximately 30–40 minutes. Students from various academic majors participated in both samples.

Data were screened prior to analysis to ensure compliance with statistical assumptions. Assumptions underlying multivariate analyses, including linearity, normality, and absence of multicollinearity, were examined and met. Multicollinearity among predictors was not observed, as variance inflation factor (VIF) values were below the recommended threshold of 10. Univariate outliers were assessed using standardized z-scores, and multivariate outliers were examined using Mahalanobis distance; no cases exceeded critical values and therefore no observations were removed. Missing data were minimal and handled using listwise deletion.

In Study 1, exploratory factor analysis (EFA) was conducted to examine the underlying factorial structure of the VIA-IS in the Iranian sample. Additionally, Pearson correlation analyses were performed to assess convergent and divergent validity through relationships between character strengths, wellbeing indicators, and affective variables. In Study 2, confirmatory factor analyses (CFA) were conducted using structural equation modeling (SEM) in AMOS to evaluate the factorial structure identified in Study 1 and to compare it with the original six-factor model proposed by Peterson and Seligman (2004). Descriptive statistics and internal consistency coefficients (Cronbach’s alpha) were also calculated. Construct validity was further examined using second-order CFA models.

Results

As it is shown in table 1, the mean scores of individuals in twenty-four character strengths range from lowest in the character strength of perspective (17.91) to highest in the character strength of kindness (21.09). It is also indicated that all character strengths have slight negative kurtosis and skewness. All zero order correlations between character strengths were significant. Men reported more scores for three-character strengths of bravery, humor, and vitality than women. Internal consistency of all character strengths was moderate, with alpha coefficients ranging from .49 to .74, except for humility with an alpha coefficient of .41. Findings indicated that only gratitude had a significant positive correlation with age. The mean age was 22.14, with a minimum of 18 up to a maximum of 54.

Table 1:
Descriptive statistics, reliabilities, gender differences, correlations between character strengths and age

Character strengths	M	SD	S	K	α	male		Female		t	Corr with age
						M	SD	M	SD		
Creativity	18.61	3.38	-.27	-.44	.73	19.20	3.14	18.43	3.43	1.71	-.05
Bravery	18.44	3.13	-.24	-.35	.59	19.12	2.88	18.23	3.18	2.12*	.05
Persistence	19.16	3.69	-.58	.31	.78	19.20	3.64	19.15	3.71	.09	-.02
Authenticity	21.01	3.03	-.97	1.37	.68	20.76	2.91	21.09	3.07	-.84	.001
Self-regulation	17.84	3.19	-.24	-.26	.49	18.25	2.98	17.71	3.24	1.27	.08
Hope	18.82	3.70	-.79	.94	.68	19.51	3.88	18.61	3.62	1.83	.01
Spirituality	18.17	3.73	-.38	-.39	.75	18.08	3.47	18.20	3.81	-.23	.07
Social intelligence	19.11	3.14	-.34	.10	.63	18.90	3.36	19.17	3.08	-.64	.008
Kindness	21.01	3.23	-1.14	1.27	.72	20.93	2.99	21.04	3.31	-.26	.01
Love	19.42	3.52	-.59	-.07	.59	19.06	3.71	19.46	3.46	-.99	.02
Leadership	18.24	3.20	-.04	-.001	.60	18.01	3.63	18.31	3.05	-.71	-.001
Forgiveness	18.39	3.65	-.56	.38	.61	18.17	3.97	18.46	3.56	-.59	.02
Curiosity	18.68	3.40	-.50	.18	.68	19.24	2.84	18.51	3.54	1.61	-.05
Love to learning	17.66	3.61	-.23	-.24	.67	18.18	3.64	17.50	3.59	1.42	.03
Fairness	18.59	3.11	-.28	.12	.55	18.12	3.23	18.74	3.07	-1.50	.02

Prudence	18.55	3.33	-.46	-.14	.64	18.82	2.80	18.46	3.48	.89	.01
Appr of beauty	19.73	2.77	-.33	-.23	.51	19.93	2.68	19.67	2.80	.70	-.10
Gratitude	19.01	2.83	-.07	-.17	.56	19.37	2.35	18.89	2.96	1.43	.11*
Humility	17.82	2.84	-.09	-.30	.41	17.78	3.19	17.83	2.73	-.13	-.02
Humor	19.56	3.53	-.48	-.35	.68	20.20	2.90	19.36	3.68	2.01*	-.002
Open mindedness	19.32	3.19	-.28	-.39	.68	19.67	2.65	19.21	3.33	1.22	-.003
Citizenship	18.76	3.48	-.47	.43	.70	18.83	3.32	18.74	3.54	.20	.01
Vitality	18.62	3.69	-.63	.60	.70	19.40	2.92	18.37	3.88	2.43*	.002
Perspective	17.97	3.33	-.16	.09	.64	18.01	3.30	17.95	3.34	.12	-.06

Correlations between character strengths and subscales of the Big Five, HFQ, PANAS, and SWLS were examined. Findings demonstrated that thirteen character strengths had a significant negative correlation with neuroticism ranging from -.12 (gratitude) to -.32 (vitality). Eight strengths had significant positive correlations with extraversion ranging from .12 (creativity) to .27 (humor). Openness to experience had significant positive correlations with eighteen character strengths ranging from .11 (authenticity) to .27 (creativity and humor). Eleven character strengths had significant positive correlations with agreeableness ranging from .11 (citizenship) to .28 (kindness). Conscientiousness had significant positive correlations with fourteen character strengths ranging from .11 (bravery) to .28 (persistence).

Table 2: correlations between character strengths with the Big Five

Strengths	N	E	O	A	C	P	R	M	A	PA	NA	SWLS
Creativity	-.25**	.12*	.31**	.01	.13*	.33**	.33**	.42**	.42**	.48**	-.15**	.05
Bravery	-.09	.13*	.21**	.02	.11*	.29**	.35**	.42**	.46**	.44**	-.06	.05
Persistence	-.09	.09	.17**	.13*	.28**	.34**	.39**	.45**	.47**	.41**	-.13*	.07
Authenticity	-.03	.09	.11*	.22**	.26**	.14**	.35**	.30**	.25**	.28**	-.10	.02
Self-regulation	-.14*	-.06	.01	.08	.10	.21**	.20**	.25**	.26**	.20**	-.03	.09
Hope	-.29**	.07	.20**	.13*	.16**	.58**	.49**	.55**	.58**	.47**	-.26**	.18**
Spirituality	-.10	.01	.007	.13*	.09	.36**	.26**	.36**	.33**	.23**	-.04	.03
Social intelligence	-.15**	.13*	.27**	.10	.20**	.23**	.38**	.29**	.33**	.32**	-.13*	.12*
Kindness	-.04	.06	.19**	.28**	.22**	.20**	.38**	.29**	.22**	.22**	-.09	.09
Love	-.14**	.19**	.16**	.15**	.17**	.41**	.51**	.34**	.39**	.39**	-.11*	.14**
Leadership	-.08	.09	.15**	.09	.18**	.16**	.27**	.21**	.21**	.25**	-.02	.04
Forgiveness	-.15**	.08	.02	.19**	-.004	.25**	.28**	.17**	.21**	.12*	-.09	.06
Curiosity	-.17**	.14*	.28**	.06	.14*	.39**	.44**	.48**	.47**	.50**	-.12*	.09
Love to earning	-.21**	.05	.09	.01	.13*	.28**	.21**	.36**	.41**	.29**	-.01	-.01
Fairness	-.09	.08	.15*	.20**	.12*	.12*	.26**	.22**	.20**	.16**	-.009	.06
Prudence	-.17**	-.03	.04	.13*	.12*	.24**	.30**	.38**	.31**	.30**	-.14**	.08
Appr of beauty	-.09	.10	.18**	<.001	.06	.23**	.28**	.28**	.27**	.34**	.02	-.007
Gratitude	-.12*	.14*	.14*	.16**	.09	.31**	.33**	.37**	.36**	.27**	-.08	.10
Humility	-.06	.06	.006	.02	.06	.22**	.25**	.25**	.26**	.18**	.05	-.001
Humor	-.10	.27**	.31**	.08	.08	.32**	.40**	.37**	.34**	.40**	-.15**	.15**

Open mindedness	-.20**	.09	.15**	.04	.09	.24**	.35**	.37**	.37**	.39**	-.13*	.08
Citizenship	-.05	.02	.13*	.12*	.11	.15**	.31**	.25**	.22**	.20**	-.01	.06
Vitality	-.32**	.20**	.21**	.06	.12*	.58**	.48**	.55**	.58**	.51**	-.22**	.18**
Perspective	-.26**	.09	.16**	.09	.10	.30**	.35**	.37**	.40**	.43**	-.08	.04

note: * $p < 0.05$, ** $p < 0.01$; dimensions (N=neuroticism, E=extraversion, O=openness to experience, A=agreeableness,

C=conscientiousness), HFQ (P=positive emotions, R=positive relationship, M=meaningfulness, A=achievement), PANAS

(PA=positive affect, NA=negative affect) and SWLS (satisfaction with life scale).

As shown in table 2, all character strengths had positive relationships with all subscales of HFQ, including positive emotions, positive relationship, meaningfulness, and accomplishment. Findings also demonstrated that all character strengths had positive correlations with positive affect. Ten character strengths had significant negative correlations with negative affect ranging from -.11 (love) to -.26 (hope). Four character strengths had significant positive correlations with the satisfaction of life ranging from .14 (love) to .18 (hope, vitality). Five character strengths of creativity (.48), bravery (.44), hope (.47), curiosity (.50), and vitality (.51) had the highest positive correlations with positive affect. All character strengths had significant positive correlations with positive affect.

Factor structure of the Farsi (Persian) version of VIA-IS

In order to study the structure of the VIA-IS, factor analysis with Varimax rotation was used. As it is shown in figure 1, five factors with Eigenvalues more than 1 were detected (the top five Eigenvalues were 10.26, 1.49, 1.31, 1.06, and 1.02). Five factors explained 63.20% of the variance. As the fifth factor was only associated with two items, it was excluded from the factor analysis.

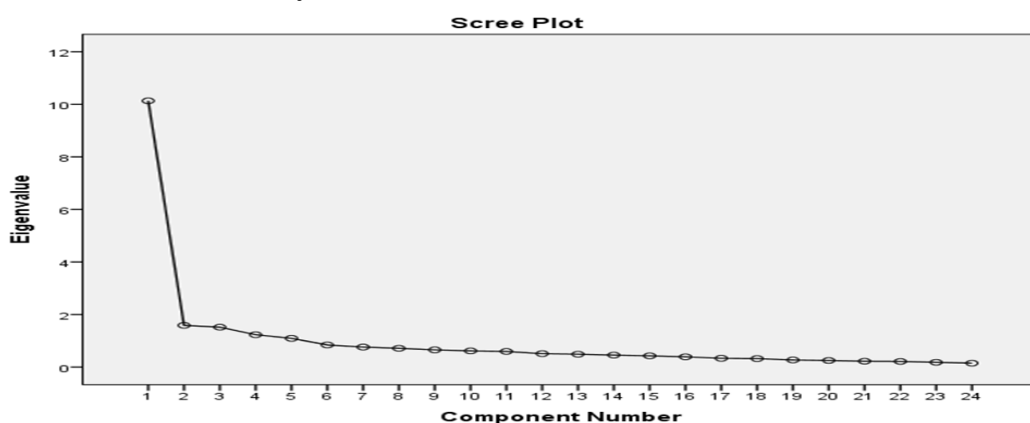


Figure1. Scree Plot of the four- Factor solution with Varimax rotation

Excluding the fifth factor only reduced four percent of the variance. The loadings of the main factors ranged from .35 to .78. Four scales demonstrated double or triple loadings (based on the criterion of the difference around $\leq .1$ between scales' loadings used by Ruch et al. (2010) Based on the highest factor loadings, four factors were named as courage, humanity, wisdom, and transcendence consequently (Table 3).

Table 3: factor analysis with principal component method and Varimax rotation

Strengths	Factor 1	Factor 2	Factor 3	Factor 4	Communalities
Creativity	.54	.21	.61	.03	.72
Bravery	.52	.10	.45	.09	.54
Persistence	.35	.12	.46	.37	.55
Authenticity	.21	.22	.28	.35	.71
Self-regulation	.10	.12	.20	.72	.59
Hope	.65	.08	.23	.35	.61
Spirituality	.32	.21	.04	.67	.61
Social intelligence	.42	.39	.40	.06	.60
Kindness	.37	.49	.05	.14	.69
Love	.55	.37	.07	.10	.54
Leadership	.18	.66	.44	.04	.70
Forgiveness	.31	.65	-.12	.26	.64
Curiosity	.65	.24	.38	.21	.68
Love to earning	.22	.27	.55	.26	.68
Fairness	.14	.72	.24	.14	.65
Prudence	.11	.11	.48	.62	.68
Appr of beauty	.50	.25	.16	.18	.39
Gratitude	.46	.25	.09	.49	.55
Humility	.14	.49	.17	.46	.51
Humor	.71	.20	.20	.02	.65
Open mindedness	.21	.21	.64	.35	.64
Citizenship	.14	.72	.25	.19	.68
Vitality	.78	.07	.21	.33	.79
Perspective	.34	.18	.64	.23	.65
Variance%	42.77	6.23	5.45	4.42	-

To examine the meaningfulness of our factors, they were correlated with other measures including positive emotions, positive relationship, meaningfulness, accomplishment, positive affect, negative affect, and satisfaction with life (table 4).

Table 4: correlation between VIA-IS factors and other measures

	Courage	Humanity	Transcendence	Citizenship
Positive emotions	.53**	.25**	.39**	.35**
Positive relations	.57**	.40**	.43**	.39**
Meaningfulness	.57**	.31**	.52**	.45**

Achievement	.59**	.30**	.54**	.41**
Positive affect	.58**	.26**	.53**	.35**
Negative affect	-.19**	-.04	-.13*	-.11
Satisfaction of life	.16**	.07	.06	.08

note: * $p < 0.05$, ** $p < 0.01$

Taken together, all factors had moderate to strong positive correlations with PERMA (Positive emotions, positive Relations, Meaningfulness, Accomplishment) and positive affect. Two factors (courage, wisdom) had significant and negative correlations with negative affect. One factors (courage) also had significant and positive correlations with satisfaction with life. These correlations support the robustness of the factors.

Confirmatory Factor Analysis

Descriptive statistics and Cronbach alpha reliability coefficients for the VIA-Strengths are reported in Table 5.

Table 5. descriptive statistics and reliability coefficients of character strengths in study 2

Character strengths	M	SD	S	K	Alpha
Creativity	18.70	3.15	-.36	-.03	.76
Bravery	18.15	2.62	-.19	-.06	.52
Persistence	19.41	3.33	-.83	1.20	.74
Authenticity	21.32	2.65	-.86	1.26	.71
Self-regulation	18.54	3.01	-.42	.16	.54
Hope	19.28	3.56	-.84	.97	.77
Spirituality	19.26	3.19	-.80	1.16	.79
Social intelligence	19.16	2.83	-.55	.40	.69
Kindness	20.97	2.78	-.81	1.57	.71
Love	20.03	2.88	-.50	.55	.58
Leadership	18.00	2.78	-.29	.35	.59
Forgiveness	18.59	3.28	-.42	.30	.68
Curiosity	18.76	2.82	-.32	.81	.66
Love to earning	17.81	3.36	-.27	-.47	.71
Fairness	18.94	2.69	-.18	-.26	.55
Prudence	18.80	3.20	-.68	.38	.74
Appr of beauty	19.53	2.58	-.23	.18	.57
Gratitude	19.64	2.90	-.40	.02	.72
Humility	17.97	2.78	-.31	.42	.59
Humor	19.04	3.28	-.49	.24	.74
Open mindedness	19.42	2.81	-.55	1.10	.73
Citizenship	19.14	2.70	-.39	.64	.66
Vitality	18.84	3.17	-.43	.31	.70
Perspective	18.26	2.80	-.01	-.17	.66

The Cronbach alpha coefficients ranged from .52 to .77. Two factorial models of VIA-IS-120 were examined using confirmatory factor analyses in AMOS-24. The first model is the six-factor model suggested by Peterson (2004); and the second model is a factorial model discovered through exploratory factor analysis in Study 1. Five goodness-of-fit indices were compared between the models. The comparative fit index (CFI) and incremental fit index (IFI) are considered acceptable if they exceed .9. The normed chi-square is another index that suggests a better fit when it is less than five (Schreiber et al., 2006). The fourth index is the parsimony CFI, where values of 0.5 and higher are more acceptable. The root-mean-square error of approximation (RMSEA) is the fifth index, with values closer to or less than .08 considered acceptable and values greater than .1 deemed weak (Schreiber et al., 2006). We examined the assumptions for maximum likelihood estimation, including the need for interval scale data and a multivariate normal distribution of observed variables. First, the sum of Likert-based items is treated as interval and continuous, despite single Likert items being ordinal in nature (Brown, 2011). Therefore, the variables extracted from the VIA-IS are considered continuous. Secondly, since the kurtosis of all measured variables was below 7, we confirmed univariate normal distributions (Byrne, 2013). Furthermore, multivariate normal distribution was confirmed as the critical ratio for multivariate kurtosis, known as Mardia's normalized estimate, was lower than 5.00 (Mardia, 1970, 1974).

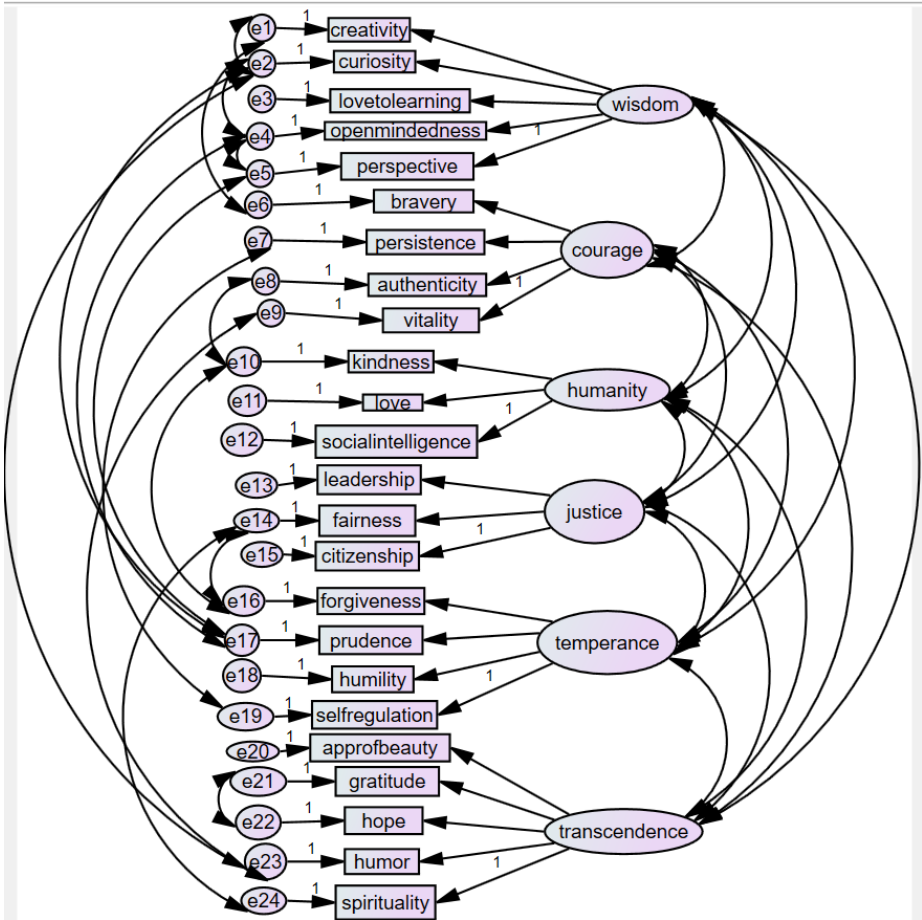


Figure2. The correlated six-factor model

The correlated six-factor model showed poor fit across most indices, including $\chi^2/df = 3.63$, $p < 0.001$, CFI = 0.81, IFI = 0.82, PCFI = 0.70, and RMSEA = 0.09. This six-factor solution revealed high modification indices (MI) related to the residual errors of the following item pairs: 17 and 4, 4 and 5, 2 and 17, 2 and 23, 2 and 4, 5 and 17, 10 and 16, 22 and 21, 14 and 24, 2 and 1, 23 and 9, 19 and 7, 10 and 8, 16 and 14, and 6 and 1. Allowing for covariances among the errors of these items significantly improved the model fit, resulting in $\chi^2 (df = 221) = 544.2$, $p = 0.001$, and providing a good data-model fit (see Table 6). Although the Bollen–Stine p -value was 0.002, most residual covariances were below two. Examination of the factor loadings indicated that all items had positive and significant loadings (all above 0.5, $p < 0.001$), suggesting they loaded meaningfully (Arifin & Yusoff, 2016).

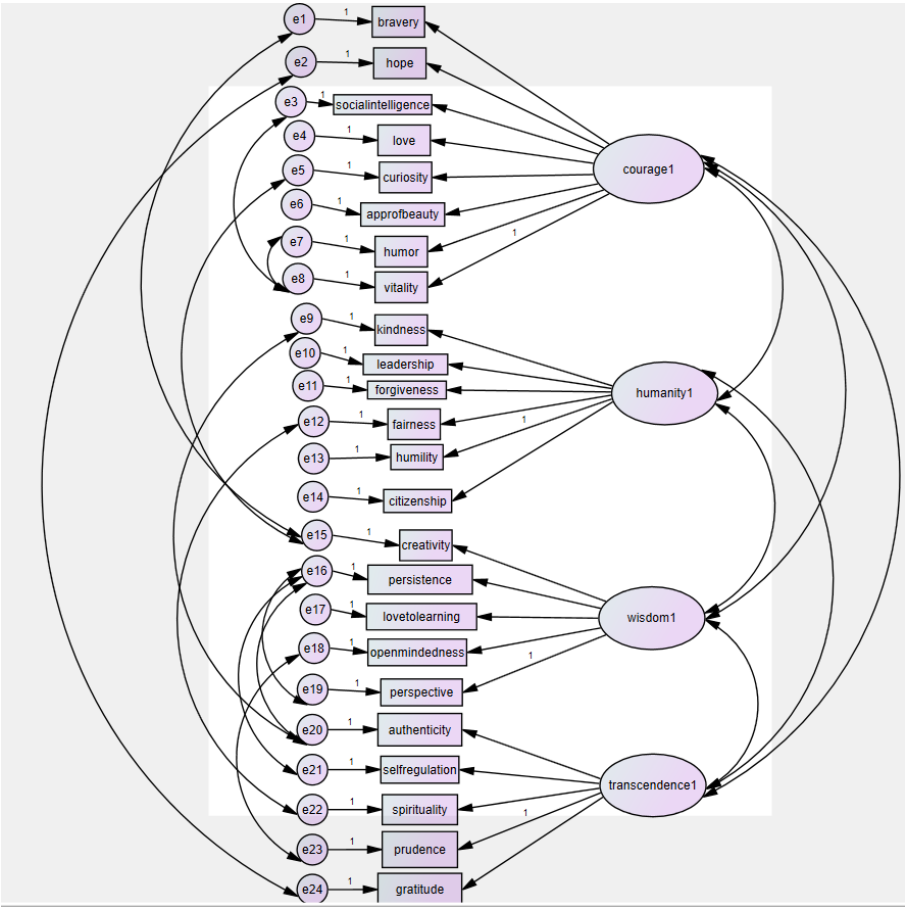


Figure 3: correlated four model

The fit indices for the four-factor model also indicated poor fit, with $\chi^2/df = 3.53$, $p < 0.001$, CFI = 0.81, PCFI = 0.72, IFI = 0.82, RMSEA = 0.09, and a Bollen–Stine p -value of 0.002, suggesting inadequate fit. Similar to the six-factor model, there were high within-item errors for pairs including 23 and 18, 15 and 5, 7 and 8, 24 and 2, 18 and 19, 21 and 16, 20 and 16, 22 and 12, 3 and 8, 15 and 1, and 10 and 11. Allowing these errors to covary led to a significant improvement in model fit, resulting in $\chi^2 (df = 235) = 576.3$, $p < 0.001$, indicating a good overall fit. The fit indices for the six-factor and four-factor models are presented in Table 6.

Table 6. fit indices of the six and four factorial models

Model	χ^2/df	p	CFI	PCFI	IFI	RMSEA	AIC
Six-factor	2.45	<.001	.90	.72	.90	.07	700.23

Four-factor	2.41	<.001	.90	.76	.90	.07	698.45
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A comparison of the Akaike Information Criterion (AIC) and PCFI statistics among the tested models showed that the four-factor model with correlated errors had a superior fit. The parameter estimates for the four-factor and six-factor models in both samples demonstrated moderate to high factor loadings (i.e., > 0.55) for all items.

Discussion

The first aim of the present study was to validate the VIA-IS in an Iranian population. Findings indicated that internal consistencies of character strengths in both samples were appropriate with the exception of the character strength of humility in the first study. In general, the first hypothesis is confirmed as six character strengths in sample one and thirteen strengths in sample two had acceptable α coefficient close and more than .7. Questionable α coefficient from .6 to .7 were found in eleven character strengths in the first sample and four character strengths in the second sample. Higher internal consistencies of character strengths in some previous studies can be related to cultural issues as Arabic version of VIA-120 has similar internal consistencies. For example, internal consistencies of character strengths in VIA-120 were .48 to .73 in Qatar (AlAhmadi & Bretherton, 2021), but the Scales were between .58 to .87 in Germany (Höfer et al., 2020); and between .69 to .88 in Spanish population (Azañedo et al., 2014). Consistently some researchers argue that western participants are more familiar with psychological questionnaires than non-western participants (Vittersø et al., 2002). Lower internal consistencies can also be related to the version of VIA-IS that was used in that studies, as most previous studies validated VIA-240 (Azañedo et al., 2014; Höfer et al., 2020; Singh & Choubisa, 2010).

The second hypothesis of the present study assumed that love, hope, gratitude, curiosity, and zest have a higher positive correlation with life satisfaction and positive affect than other strengths. Results demonstrated that all character strengths had a significant positive correlation with positive affect. Among them, five character strengths of curiosity, creativity, bravery, vitality, and hope had the highest positive correlations. These results are somehow consistent with previous research as findings demonstrated than four character strengths of hope, curiosity, and vitality had a higher positive correlation with positive affect than other character strengths (Littman-Ovadia & Lavy, 2011). Ten character strengths had significant negative correlations with negative affect. These findings are also consistent with previous research (Littman-Ovadia & Lavy, 2011), and they support the assumption that character strengths promote positive affect more than they demolish negative affect (Peterson, 2004). Four character strengths of hope, love, humor, and vitality had the positive and significant correlation with satisfaction with life. These findings are somehow consistent with previous studies as they found a high positive and significant correlation between satisfaction with life and the character strengths of hope, love, and vitality (Park & Peterson, 2008, 2009; Park et al., 2004).

In the present study, all character strengths had positive and significant correlations with elements of PERMA (including positive emotions, positive relations, meaningfulness, and achievement). These findings are consistent with the assumption that the cultivation of character strengths should result in higher wellbeing (Rashid, 2015). These findings also confirm the third hypothesis of the present study that all character strengths have a significant and positive correlation with elements of PERMA. Consistently some other studies demonstrated a significant relationship between the character strengths and some elements of PERMA. For example, some research demonstrated the relationship between intimacy and curiosity among partners (Kashdan et al., 2011; Kashdan & Roberts, 2004). Another study demonstrated that character strengths enacted as marital values strengthen the partners' relationship (Veldorale-Brogan et al., 2010). Relationships between some character strengths and accomplishments are also evident in previous research (Park et al., 2004; Wagner & Ruch, 2015).

In the fourth hypothesis of the present study, we hypothesized that character strengths have significant correlations with Big Five dimensions of personality proposed by Peterson (2004), as explained in the introduction. Findings to some extent confirmed this hypothesis, as the highest correlations were found between extraversion and character strengths of humor and vitality. "Openness to experience" had high correlations with character strengths of curiosity and creativity. Interestingly, the appreciation of beauty showed the only significant correlation with openness to experience among other personality traits, which aligns with the proposal made by Peterson (2004). "Agreeableness" had the highest correlations with character strengths of kindness, and the strength of gratitude had the highest significant correlation with agreeableness among personality traits. "Conscientiousness" had the highest correlation with persistence. In contradiction to the proposal, self-regulation had no significant relation with conscientiousness. Finally thirteen character strengths had significant and negative correlations with "neuroticism" not proposed by Peterson (2004). These findings somewhat strengthen the construct validity of the VIA-IS. However, there are concerns regarding the differential validity of the VIA-IS, as some character strengths correlated with more than one personality dimension, and these correlations are also relatively weak, ranging from -0.32 to 0.31.

We also examined the relationship between character strengths and age. Results demonstrated that only the character strength of gratitude had a significant positive correlation with age. Previous studies also demonstrated different findings. One of the studies found a significant negative correlation between age and the character strengths of kindness, love, and spirituality (Littman-Ovadia & Lavy, 2011) but Ruch et al. (2010) found a positive correlation between age and some strength including curiosity, fairness, spirituality, self-regulation, modesty, gratitude, forgiveness, and prudence. Park et al. (2004) did not report any correlation between character strengths and age. Linley et al. (2007) found the positive relationship between age and some character strengths, including curiosity, love of learning, fairness, forgiveness, and self-regulation. Martínez-

Martí and Ruch (2014) also demonstrated that in 27-36 years group, strengths that promote commitment and affiliation (i.e., kindness and honesty) were among the top five strengths that had the highest correlation with wellbeing. In the age group of 37-46, strengths that promote family and work (i.e., love and leadership) were among the top five with the highest correlation with wellbeing (Martínez-Martí & Ruch, 2014). And finally, in the age group of 47-57, strengths that facilitate integration and involvement with the environment (i.e., gratitude, love of learning) were among the top five strengths with the highest correlation with wellbeing. Thus, there are some controversies in the findings associated with age and character strengths that can be due to cultural differences.

Findings of the present study also demonstrated that men scored higher than women in character strengths of bravery, humor, and vitality. Previous studies had controversial results. Linley et al. (2007) that in the UK, women usually gave higher ratings in character strengths, compared to men with the exception of creativity. They also found out that the top five character strengths (open-mindedness, fairness, curiosity, and love of learning) in Britain are similar in men and women. Findings in the Hebrew speaking population demonstrated that women scored higher in strengths of love, appreciation of beauty, and gratitude, and men scored higher in creativity (Littman-Ovadia & Lavy, 2011). Findings in the German-speaking population of Switzerland are different as men scored modestly higher on open-mindedness, curiosity, love of learning, and fairness, while women scored modestly higher on humanity's strengths (Ruch et al., 2010). These results indicate that the difference between men and women in character strengths is cultural.

Exploratory factor analysis of the twenty-four character strengths revealed a four-factor solution. Confirmatory factor analyses in both samples demonstrated that this factor model best fitted the data. The four factors were identified as courage, humanity, wisdom, and transcendence. Another study identified a similar four-factor structure within the Croatian population, including Interpersonal Strengths, Fortitude, Vitality, and Cautiousness (Brdar & Kashdan, 2010). It is important to note that our results also aligned with the six-factor model proposed by Peterson (2004); but the four-factor solution was a better fit according to parsimony indices. The variation in the number and content of virtues is not surprising, as the classification of virtues and strengths was based on a literature review and consensus among professionals rather than factorial analysis (Shryack et al., 2010). The number of strengths corresponding to each factor also differed from the initial model of virtues. In the original classification, each virtue was associated with three to five character strengths. In contrast, the first factor (courage) in our study was linked to eight character strengths: Bravery, Hope, Social Intelligence, Love, Curiosity, Appreciation of Beauty, Humor, and Vitality. The second factor (humanity) was associated with six strengths: Kindness, Leadership, Forgiveness, Fairness, Humility, and Citizenship. The third and fourth factors corresponded with five strengths each. We also examined the correlation between these virtues and other measures. The results indicated that all virtues had significant and positive correlations with positive affect,

positive emotions, positive relationships, meaningfulness, and accomplishment. Additionally, the virtues of courage and wisdom exhibited a significant negative correlation with negative affect. Notably, only the virtue of courage had a significant positive correlation with life satisfaction. These findings confirm the convergent validity of the virtues identified in the present study.

Conclusion

Taken together, the reliability, factorial, and correlational findings of the present study provide theoretical support for the VIA classification of character strengths. The majority of VIA-IS subscales demonstrated acceptable internal consistency in the Persian version, indicating that the items coherently represent theoretically defined strength constructs, despite some variability across strengths. This pattern is consistent with prior cross-cultural research suggesting that certain character strengths may be more contextually embedded and therefore show lower homogeneity across cultural settings. Furthermore, exploratory and confirmatory factor analyses supported a four-factor higher-order structure—courage, humanity, wisdom, and transcendence—which, while differing from the original six-virtue model proposed by Peterson (2004), has been repeatedly observed in empirical studies and reflects a parsimonious organization of strengths at a broader conceptual level. Importantly, the factorial coherence of this structure was complemented by theoretically meaningful correlation patterns: character strengths showed systematic positive associations with positive affect, life satisfaction, and wellbeing elements, and negative associations with negative affect and neuroticism. Stronger relations for strengths such as hope, vitality, curiosity, creativity, and bravery further align with the VIA theory's emphasis on strengths as motivational and energizing capacities. The generally modest correlations with the Big Five personality traits support the theoretical position that character strengths are related to, yet conceptually distinct from, basic personality dimensions. Collectively, these findings indicate that the Persian VIA-IS-120 retains both the structural and functional assumptions of the VIA framework, thereby providing empirical support for its theoretical validity in a Persian-speaking cultural context.

Limitations and future research

Our study has some limitations. First, participants responded to all questionnaires in one session. The interactive effect of completing one questionnaire might affect others. Secondly, all scales in the present study were based on self-reports, and this can make some interpretative issues that are usual for self-report questionnaires. We recommend repeating this study with objective scales in future research. It is also recommended to include a qualitative method with quantitative one to have a better understanding of cultural issues related to character strengths.

Disclosure Statements

We have no known conflict of interest to disclose.

ORCIDORCID: 0000-0001-8249-93**References**

- AlAhmadi, A., & Bretherton, R. (2021). Character Strengths in Qatar: A Psychometric Evaluation of the VIA-IS Short Form and the Correlations with Subjective Wellbeing. *European Journal of Applied Positive Psychology*, 5(25), 1-14.
- Arifin, W. N., & Yusoff, M. S. B. (2016). Confirmatory factor analysis of the Universiti Sains Malaysia emotional quotient inventory among medical students in Malaysia. *Sage Open*, 6(2), 2158244016650240.
- 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. *Clínica y Salud*, 25(2), 123-130. <https://doi.org/10.1016/j.clysa.2014.06.002>
- Azañedo, C. M., Fernández-Abascal, E. G., & Barraca, J. (2017). The short form of the VIA Inventory of Strengths. *Psicothema*, 29(2), 254-260. <https://doi.org/10.7334/psicothema2016.225>
- Bakhshipour, R., & Dezhkam, M. (2006). A confirmatory factor analysis of the positive affect and negative affect scales (PANAS).
- Blais, M. R., Vallerand, R. J., Pelletier, L. G., & Brière, N. M. (1989). L'échelle de satisfaction de vie: Validation canadienne-française du "Satisfaction with Life Scale.". *Canadian Journal of Behavioural Science/Revue canadienne des sciences du comportement*, 21(2), 210. <https://doi.org/10.1037/h0079854>
- Brdar, I., & Kashdan, T. B. (2010). Character strengths and well-being in Croatia: An empirical investigation of structure and correlates. *Journal of research in personality*, 44(1), 151-154. <https://doi.org/https://doi.org/10.1016/j.jrp.2009.12.001>
- Brown, J. D. (2011). Likert items and scales of measurement. *Statistics*, 15(1), 10-14.
- Buschor, C., Proyer, R. T., & Ruch, W. (2013). Self-and peer-rated character strengths: How do they relate to satisfaction with life and orientations to happiness? *The Journal of Positive Psychology*, 8(2), 116-127. <https://doi.org/https://doi.org/10.1080/17439760.2012.758305>
- Byrne, B. M. (2013). *Structural equation modeling with Mplus: Basic concepts, applications, and programming*. routledge.
- Carr, A. (2013). *Positive psychology: The science of happiness and human strengths*. Routledge.
- Costa, P., & McCrae, R. (1985). The NEO personality inventory: Psychological assessment resources Odessa. FL.[Google Scholar].

- Crawford, J. R., & Henry, J. D. (2004). The Positive and Negative Affect Schedule (PANAS): Construct validity, measurement properties and normative data in a large non-clinical sample. *British journal of clinical psychology*, 43(3), 245-265. <https://doi.org/10.1348/0144665031752934>
- Diener, E., Emmons, R., Larsen, R., & Griffin, S. (1985). The satisfaction with life scale. *Journal of Personality Assessment*, 49 (1), 71-75. In.
- Diener, E., Wirtz, D., Tov, W., Kim-Prieto, C., Choi, D.-w., Oishi, S., & Biswas-Diener, R. (2010). New well-being measures: Short scales to assess flourishing and positive and negative feelings. *Social indicators research*, 97, 143-156. <https://doi.org/10.1111/1467-9280.14461>.
- Gouveia, V. V., Milfont, T. L., Da Fonseca, P. N., & de Miranda Coelho, J. A. P. (2009). Life satisfaction in Brazil: Testing the psychometric properties of the satisfaction with life scale (SWLS) in five Brazilian samples. *Social indicators research*, 90(2), 267.
- Haynes, S. N., Richard, D., & Kubany, E. S. (1995). Content validity in psychological assessment: A functional approach to concepts and methods. *Psychological assessment*, 7(3), 238.
- Höfer, S., Hausler, M., Huber, A., Strecker, C., Renn, D., & Höge, T. (2020). Psychometric characteristics of the German values in action inventory of strengths 120-item short form. *Applied Research in Quality of Life*, 15(2), 597-611.
- Kashdan, T. B., McKnight, P. E., Fincham, F. D., & Rose, P. (2011). When curiosity breeds intimacy: Taking advantage of intimacy opportunities and transforming boring conversations. *Journal of personality*, 79(6), 1369-1402.
- Kashdan, T. B., & Roberts, J. E. (2004). Trait and state curiosity in the genesis of intimacy: Differentiation from related constructs. *Journal of social and Clinical Psychology*, 23(6), 792-816.
- Kline, R. B. (2016). *Principles and practice of structural equation modeling*, 4th ed. The Guilford Press.
- Lang, F. R., John, D., Lüdtke, O., Schupp, J., & Wagner, G. G. (2011). Short assessment of the Big Five: Robust across survey methods except telephone interviewing. *Behavior research methods*, 43, 548-567. <https://doi.org/10.3758/s13428-011-0066-z>
- Lewis, C. A., Bunting, B. P., Shevlin, M. E., & Joseph, S. (1995). Confirmatory factor analysis of the satisfaction with life scale: Replication and methodological refinement. *Perceptual and Motor Skills*, 80(1), 304-306. <https://doi.org/https://doi.org/10.2466/pms.1995.80.1.304>
- Linley, P. A., Maltby, J., Wood, A. M., Joseph, S., Harrington, S., Peterson, C., Park, N., & Seligman, M. E. (2007). Character strengths in the United Kingdom: The VIA inventory of strengths. *Personality and individual differences*, 43(2), 341-351. <https://doi.org/10.1016/j.paid.2006.12.004>

- Littman-Ovadia, H., & Lavy, S. (2011). Character strengths in Israel: Hebrew Adaptation of the VIA Inventory of Strengths. *European Journal of Psychological Assessment*, 28(1), 41-50. <https://doi.org/https://doi.org/10.1027/1015-5759/a000089>
- Mardia, K. V. (1970). Measures of multivariate skewness and kurtosis with applications. *Biometrika*, 57(3), 519-530.
- Mardia, K. V. (1974). Applications of some measures of multivariate skewness and kurtosis in testing normality and robustness studies. *Sankhyā: The Indian Journal of Statistics, Series B*, 115-128.
- 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. <https://doi.org/https://doi.org/10.3389/fpsyg.2014.01253>
- McGrath, R. E. (2015). Character strengths in 75 nations: An update. *The Journal of Positive Psychology*, 10(1), 41-52. <https://doi.org/https://doi.org/10.1080/17439760.2014.888580>
- Namdari, K., Moulavi, H., Malekpour, M., & Kalantari, M. (2009). The effect of cognitive hope enhancing training on character strengths of dysthymic clients.
- Park, N., & Peterson, C. (2008). Positive psychology and character strengths: Application to strengths-based school counseling. *Professional school counseling*, 12(2), 2156759X0801200214. <https://doi.org/https://doi.org/10.1177/2156759X0801200214>
- Park, N., & Peterson, C. (2009). Character strengths: Research and practice. *Journal of college and character*, 10(4), 1-10. <https://doi.org/10.2202/1940-1639.1042>
- Park, N., Peterson, C., & Seligman, M. E. (2004). Strengths of character and well-being. *Journal of social and Clinical Psychology*, 23(5), 603-619. <https://doi.org/https://doi.org/10.1521/jscp.23.5.603.50748>
- Peterson, C. (2004). Character strengths and virtues: A handbook and classification. *American psychological association*, 25.
- Rashid, T. (2015). Positive psychotherapy: A strength-based approach. *The Journal of Positive Psychology*, 10(1), 25-40. <https://doi.org/10.1080/17439760.2014.920411>
- Ruch, W., Proyer, R. T., Harzer, C., Park, N., Peterson, C., & Seligman, M. E. (2010). Values in action inventory of strengths (VIA-IS). *Journal of individual differences*. <https://doi.org/10.1027/1614-0001/a000022>
- Schreiber, J. B., Nora, A., Stage, F. K., Barlow, E. A., & King, J. (2006). Reporting structural equation modeling and confirmatory factor analysis results: A review. *The Journal of educational research*, 99(6), 323-338. <https://doi.org/https://doi.org/10.3200/JOER.99.6.323-338>
- Seligman, M. E. (2004). *Authentic happiness: Using the new positive psychology to realize your potential for lasting fulfillment*. Simon and Schuster.

- Seligman, M. E. (2011). *Flourish: A visionary new understanding of happiness and well-being*. Simon and Schuster.
- SHEIKHI, M., ALI, H. H., AHADI, H., & SEPAH, M. M. (2011). Psychometric properties of satisfaction with life scale.
- Shryack, J., Steger, M. F., Krueger, R. F., & Kallie, C. S. (2010). The structure of virtue: An empirical investigation of the dimensionality of the virtues in action inventory of strengths. *Personality and individual differences*, 48(6), 714-719. <https://doi.org/https://doi.org/10.1016/j.paid.2010.01.007>
- Singh, K., & Choubisa, R. (2010). Empirical validation of values in action-inventory of strengths (VIA-IS) in Indian context. *Psychological Studies*, 55, 151-158. <https://doi.org/10.1007/s12646-010-0015-4>
- Soleimani, S., Rezaei, A. M., Kianersi, F., Hojabrian, H., & Khalili Paji, K. (2015). Developement and validation of flourishing questionnaire based on seligman's model among Iranian university students. *Journal of Research and Health*, 5(1), 3-12.
- Veldorale-Brogan, A., Bradford, K., & Vail, A. (2010). Marital virtues and their relationship to individual functioning, communication, and relationship adjustment. *The Journal of Positive Psychology*, 5(4), 281-293. <https://doi.org/10.1080/17439760.2010.498617>
- Vittersø, J., Røysamb, E., & Diener, E. (2002). The concept of life satisfaction across cultures: Exploring its diverse meaning and relation to economic wealth. *The universality of subjective wellbeing indicators: A multi-disciplinary and multi-national perspective*, 81-103. https://doi.org/10.1007/978-94-010-0271-4_6
- Wagner, L., & Ruch, W. (2015). Good character at school: positive classroom behavior mediates the link between character strengths and school achievement. *Frontiers in psychology*, 6, 610. <https://doi.org/https://doi.org/10.3389/fpsyg.2015.00610>
- Watson, D., Clark, L. A., & Tellegen, A. (1988). Development and validation of brief measures of positive and negative affect: the PANAS scales. *Journal of personality and social psychology*, 54(6), 1063. <https://doi.org/10.1037/0022-3514.54.6.1063>
- Weber, M., Ruch, W., Littman-Ovadia, H., Lavy, S., & Gai, O. (2013). Relationships among higher-order strengths factors, subjective well-being, and general self-efficacy—The case of Israeli adolescents. *Personality and individual differences*, 55(3), 322-327. <https://doi.org/10.1016/j.paid.2013.03.006>