Psihologijske teme, 34 (2025), 2, 277-305
Izvorni znanstveni rad UDK: 159.964.21.072
https://doi.org/10.31820/pt.34.2.6

Exploring the COMPIN-10 and SUCOMP-10 Scales: Measuring Inferiority and Superiority Complexes Across Nine Countries

Đorđe Čekrlija[1,2], Julie Aitken Schermer[3], Ilija Dojčinovski[4], Nikola Miloš Roković[5], Yamen Hrekes[1], Bogdan Kalagurka[6], Lyudmyla Kolisnyk[6], Nurfitriany Fakhri[7], Shereena Naranath Mohammedali[8], Vojin Striković[9], and Ivan Zečević[10]

[1] Institute for Psychology, University of Greifswald, Greifswald, Germany
[2] Faculty of philosophy, University of Banja Luka, Banja Luka, Bosnia and Herzegovina
[3] Departments of Psychology and Management & Organizational Studies, Faculty of Social Science, University of Western Ontario, London, Canada
[4] International Psychoanalytic University in Berlin, Berlin, Germany
[5] Dr. Lazar Vrkatić Faculty of Law and Business Study, Novi Sad, Serbia
[6] Sumy State University, Sumy, Ukraine
[7] Makassar State University, Makassar, Indonesia
[8] University of Calicut, Kerala, India
[9] Municipality of Nikšić, Nikšić, Montenegro
[10] Neuropsychiatric Hospital Dr. Ivan Barbot, Popovača, Croatia

Abstract

This study introduces the short Inferiority Complex (COMPIN-10) and Superiority Complex (SUCOMP-10) scales. Participants (N = 4,010; 57% women), aged between 18 and 77 years (M = 29.68, SD = 10.62), were recruited from nine countries and completed the scales online in their native languages. The reliability, dimensionality, and convergent validity of the scales were examined. Satisfactory reliability coefficients were confirmed for both scales. The unidimensional structure of the COMPIN-10 scale was supported across country samples, whereas the SUCOMP-10 scale did not exhibit a unidimensional structure. Additionally, the results indicated that the COMPIN-10 scale only achieved loading invariance, while the SUCOMP-10 scale lacked invariance across countries. The inferiority scores correlated negatively with self-esteem measures, extraversion, agreeableness, and conscientiousness, and the superiority scores correlated positively

Đorđe Čekrlija https://orcid.org/0000-0001-8177-8663
Julie Aitken Schermer https://orcid.org/0000-0002-3469-7710
Ilija Dojčinovski https://orcid.org/0000-0001-6052-8788
Nikola Miloš Roković https://orcid.org/0000-0002-7844-0386
Mirjana Jovanovska Stojanovska https://orcid.org/0000-0002-2972-3478
Bogdan Kalagurka https://orcid.org/0000-0001-7377-8655
Lyudmyla Kolisnyk https://orcid.org/0000-0003-2872-1611
Nurfitriany Fakhri https://orcid.org/0000-0001-5323-8125
Ivan Zečević https://orcid.org/0000-0002-7153-9199

✉ Đorđe Čekrlija, University of Greifswald, Franz-Mehring-Strasse 44, Greifswald, Germany. E-mail: *dorde.cekrlija@uni-greifswald.de*

with self-esteem measures, extraversion, and conscientiousness, confirming the convergent validity of both scales in the respective country samples. The results of this multi-country study indicate that the COMPIN-10 scale is a more robust research instrument; however, further revision and refinement of both scales is recommended.

Keywords: inferiority complex, superiority complex, COMPIN-10 scale, SUCOMP-10 scale, psychometric properties, Adler

Introduction

Although feelings of personal worth encompass an important psychological construct, few scales are available to assess personal worth from an Adlerian perspective of inferiority and superiority complexes. For example, Rosenberg's self-esteem scale (Rosenberg, 1965) does not capture the essence of feelings of inferiority and may not reflect the neuroses characteristic of the superiority complex. Estimating superiority based on narcissism, a dark personality trait (Paulhus et al., 2013), is challenging as Adler's superiority complex is unidimensional, whereas narcissism has been found to consist of multiple dimensions (Kowalski et al., 2021), including grandiose and vulnerable narcissism. In contrast, the Inferiority Scale (Yao et al., 1998) was developed on the basis of the authors' clinical experience without a coherent theoretical background (Yao & Cottraux, 2002) and does not assess a superiority complex.

The present study introduces two 10-item scales for assessing the Inferiority Complex, titled the COMPIN-10, and the Superiority Complex, titled the SUCOMP-10, which were developed within the theoretical framework of Adlerian individual psychology. In addition to introducing these scales, this study also evaluates their psychometric properties in samples from nine different countries.

The Inferiority and Superiority Complexes

An inferiority complex is characterized by intense feelings of low worth and a personally perceived inability to achieve one's own ideal standards (Ashby & Kottman, 1996) and forms the basis of a neurotic disposition (Adler, 1945; Ansbacher & Ansbacher, 1956). A child's general sense of their own worth and abilities is primarily based on their perception of complete dependence and helplessness in relation to adults. The child's feeling of inferiority and weaker abilities activates compensatory processes to overcome the perceived inadequacy that arises from real or imagined inferiority (Arranz-Freijo & Barreto-Zarza, 2021). Adler (1938) stated that organ inferiority and the perception of one's own physical appearance represent two basic determining factors. Organ inferiority is a form of inferiority that develops in an individual's early years, particularly in children born with malfunctioning organs, who may develop a feeling of incompleteness, which

forces them to develop other competencies to compensate for their personal deficiency (Coleman & Croake, 1987). While such cases represent an objective indicator of inferiority, an individual's perception of their physical appearance reflects subjective feelings of inferiority (Ferreira et al., 2013). Compensation represents a healthy way to overcome challenges and results in normal development (Ashby & Kottman, 1996). When compensation does not enable a child to overcome conflicts or challenges, an inferiority complex develops, manifesting as persistent feelings of inferiority and representing a neurotic disposition (Kottman & Heston). In addition to the general feeling of incompetence, the inferiority complex also includes a tendency to focus on one's own weaknesses in dealing with problems and to provide excuses (Adler, 1952).

Insufficient compensatory processes can also lead to the activation of over-compensation, which motivates a person to strive toward intensive personal development and superiority over others, leading to the development of a superiority complex (Papanek, 1965). It is important to note that the primary aim of the superiority complex is not the achievement of success in any specific area, but the permanent and general confirmation of self-worth, which neutralizes feelings of inferiority (Adler, 1945). On the other hand, apart from the results of overcompensation, the feeling of superiority might be evolutionary-based (Johnson & Fowler, 2011), as well as associated with the desire for social status (Anderson et al., 2015). Generally, the superiority complex presents an exaggerated feeling of personal worth and includes a tendency toward domination, ostentatiousness, arrogance, attributing multiple talents to oneself, vanity about one's appearance and abilities, egocentrism, heightened affect, and gratification from the admiration of others (Kottman & Heston, 2012). According to Maniacci (2007), superiority becomes a problem when one strives to be superior to others. It is also important to emphasize that the superiority complex overlaps with narcissism, but the two constructs differ in interpersonal dynamics. While individuals with a superiority complex may withdraw when their self-image is challenged, narcissists tend to manipulate others in order to maintain their inflated self-image (Rogoza et al., 2016). Additionally, narcissism is characterized by more adversarial interpersonal tendencies and diminished empathy. Both inferiority and superiority complexes develop from intense feelings of low self-worth (Papanek, 1965). Both feelings of inferiority and superiority contribute uniquely to an individual's development, as one's personality and lifestyle emerge from the complex interplay of the familial, social, and cultural environments into which they are born (Arranz-Freijo & Barreto-Zarza, 2021).

Development of the COMPIN-10 and SUCOMP-10 Scales

The 40-item scale titled COMPIN (Mitrović, 1998) was developed to encompass indicators of an inferiority complex, including a persistent feeling of low worth, passivity, a tendency to withdraw, discouragement, and a belief in innate

unluckiness. The COMPIN scale was found to have a robust unidimensional structure and good psychometric properties (Mitrović, 1998), and to correlate positively with neuroticism and negatively with extraversion (Čekrlija et al., 2018). The 38-item scale titled SUCOMP (Mitrović, 1998) was designed as a measure of the superiority complex, referring to the overemphasis of one's own worth. It includes an exaggerated feeling of superiority over others, high self-worth ratings, boastfulness, and a self-image of supremacy as indicators of the superiority complex. Research has shown that SUCOMP has demonstrated sound scale properties (Čekrlija et al., 2017; Ignjatović et al., 1995), and that score on the scale correlates positively with Eysenck's psychoticism scale scores and negatively with Eysenck's neuroticism scale scores (Ruk & Momčilov, 1996). Additionally, the SUCOMP score correlated positively with Zuckerman's scales of sensation seeking and activity, and negatively with Zuckerman's neuroticism scale (Čekrlija et al., 2018).

Čekrlija et al. (2017) shortened both scales to 10-items versions to provide more economical instruments for research purposes. The shortened scales were named COMPIN-10 and SUCOMP-10 and were translated into English using the standard back-translation procedure. The short COMPIN-10 scale was initially tested in Bosnia and Herzegovina and Serbia using the original version in Serbian, and in India and Malaysia using Malayalam and English translations respectively. The findings revealed good measurement characteristics and a robust structure of the short inferiority complex scale in all four countries (Čekrlija et al., 2020), with significantly higher scores in the Indian and Malaysian samples. It was concluded that the English and Malayalam versions of the scale were as good as the original version and that the scale can be used as a self-report measure of inferiority complexes.

The short COMPIN-10 and SUCOMP-10 scales have also been confirmed as reliable tools for evaluating the inferiority and superiority complex in Ukraine (Kolisnyk et al., 2020), Turkey (Derin & Sahin, 2023a) and Canada (Čekrlija et al., in press). The Urdu version of the COMPIN-10 scale tested in Pakistan (Sadiq et al., 2023) showed good convergent and discriminant validity. Furthermore, short measures of inferiority and superiority complex scales were found to be associated with personality traits assessed with the BFI-10 (Rammstedt & John, 2007) and dark personality traits assessed with the Dark Triad Dirty Dozen scale (DTDD; Jonason & Webster, 2010). The inferiority complex correlated positively with neuroticism, narcissism and machiavellianism, and negatively with conscientiousness, agreeableness and extraversion; the superiority complex correlated positively with conscientiousness, extraversion, openness and all dark triad traits (Čekrlija et al., 2023). Based on the overall encouraging findings reported for the COMPIN-10 and SUCOMP-10 scales in different countries and languages, it is suggested that the COMPIN-10 and the SUCOMP-10 might serve as universally adequate measures for assessing individual differences in feelings of inferiority and superiority.

The Present Study

Therefore, the present study expands upon existing research by examining the psychometric properties of the COMPIN-10 and SUCOMP-10 scales. For this study, researchers from different countries were invited to translate the scales and collect a sample of at least 200 participants each, facilitating a multi-country validation study of the COMPIN-10 and SUCOMP-10 scales. Since the languages in Bosnia and Herzegovina, Croatia, Montenegro, and Serbia are recognized as the same B-C-S language, only slight modifications to the original scales written in Serbian were made to adjust the items for the other three countries. In contrast, in India, Indonesia, North Macedonia, Syria, and Ukraine, the national versions of the scales were developed using the back-translation procedure from the English version originally tested by Čekrlija et al. (2020). The scales were first translated from English into the national languages (Malayalam, Malay, Macedonian, Arabic, and Ukrainian, respectively), and then back-translated into English by independent linguistic experts. After a successful translation procedure, each collaborator developed an online form of the questionnaire and recruited participants.

This study aims to examine the dimensionality, reliability, and convergent validity of the COMPIN-10 and SUCOMP-10 scales across countries. First, it is hypothesized that the inferiority and superiority complexes are robust and generalizable dimensions of individual differences across different countries. It is expected that: a) all items of the COMPIN-10 scale, which represent indicators of the inferiority complex as defined by Adler's theory, will have substantial loadings on a single scale factor across countries; and b) all items of the SUCOMP-10 scale, which represent indicators of the superiority complex as defined by Adler's theory, will have substantial loadings on a single scale factor across countries. This hypothesis will be tested by assessing the factor invariance of the inferiority and superiority constructs across countries. Second, it is hypothesized that both the COMPIN-10 and SUCOMP-10 scales will show good reliability across all national samples. Third, to examine the convergent validity of the COMPIN-10 and SUCOMP-10 scales, the correlations with self-esteem and the Big Five personality traits will be assessed. It is expected that the inferiority complex, as assessed by the COMPIN-10, will be negatively correlated with self-esteem, and that the superiority complex, as assessed by the SUCOMP-10 scale, will be positively correlated with self-esteem measures. It is also hypothesized that inferiority will be positively correlated with neuroticism and negatively correlated with extraversion, agreeableness, and conscientiousness, and that the superiority complex will correlate positively with extraversion and conscientiousness.

Methods

Participants

The data on inferiority and superiority were collected over four months using online questionnaires aimed at the general population. The questionnaires were distributed via email to collaborators' contacts and students, who were encouraged to share them further using a snowball sampling approach. Additionally, the survey was disseminated through universities and social media platforms to maximize reach. Overall, 4,010 participants (2,295 women and 1,715 men) took part in the study, representing nine countries. All samples had a smaller proportion of men than women, but these differences remained negligible, χ^2 (8) = 149.07, $p < .001$, $\eta^2 = .007$. The average age of respondents was 29.68 years (SD = 10.60). Age differed significantly across the country samples, $F(8, 4001) = 84.40$, $p < .001$, $\eta^2 = .14$. Demographic information for all nine samples (Bosnia and Herzegovina, Croatia, India, Indonesia, Montenegro, North Macedonia, Serbia, Syria, and Ukraine) is reported in Table 1.

Table 1

Proportion of Men and Women and Age of Subsamples

	N	Women %	Men %	Age		
				M	*SD*	Range
Bosnia and Herzegovina	487	53.4	46.6	27.45	9.72	18 - 66
Croatia	528	64.2	35.8	32.17	10.48	18 – 71
India	421	68.6	31.4	25.42	7.04	18 – 68
Indonesia	419	63.0	37.0	23.39	8.54	18 – 56
Montenegro	301	60.1	39.9	32.70	10.84	17 – 70
North Macedonia	379	63.3	36.7	37.89	10.54	18 – 69
Serbia	476	62.2	37.8	29.00	9.40	18 – 69
Syria	550	46.9	53.1	27.79	8.00	18 – 64
Ukraine	449	62.6	37.4	32.96	13.30	18 – 77

Measures

The Inferiority Complex Scale (COMPIN-10; Čekrlija et al., 2017) is a short, 10-item scale that assesses the inferiority complex (see Appendix Table A1 for the scale items) and was developed from the 40-item COMPIN scale (Mitrović, 1998). The response format is a 5-point Likert-type scale ranging from 1 = *completely incorrect* to 5 = *completely correct*. All items are positively keyed and indicate a person's general feeling of low worth (example item: "I often feel that I will not be able to do what is expected").

The Superiority Complex Scale (SUCOMP-10; Čekrlija et al., 2017) is a 10-item scale that assesses the superiority complex (see Appendix Table A2 for the scale

items) and was developed from the 38-item SUCOMP scale (Mitrović, 1998). Respondents answer on a 5-point Likert-type scale ranging from 1 = *completely incorrect* to 5 = *completely correct*. All items are positively keyed, indicating a person's feeling of superiority (example item: "Normally, no solution can be found without me.").

The Rosenberg Self-Esteem Scale (RSES; Rosenberg, 1965) represents a 10-item scale for measuring self-esteem. The scale contains 10 items with a four-point response format ranging from 1 = *strongly agree* to 4 = *strongly disagree* (example item: "All in all, I am satisfied with myself"). The items' values were recorded before calculating the overall self-esteem score, therefore higher scores indicate respondents' higher level of self-esteem. The reliability of the scale was good in all countries, ranging from .73 in Ukraine to .89 in Serbia.

The Single-Item Self-Esteem Scale (SISES; Robins et al., 2001) is a single-item measure of global self-esteem. Participants respond to the item "I have high self-esteem" on a 7-point Likert scale ranging from 1 = *not very true of me* to 7 = *very true of me*. The scale was developed as an alternative to the Rosenberg Self-Esteem Scale and has been shown to have strong convergent validity and similar predictive validity values with RSES (Robins et al., 2001). In North Macedonia, the version of the scale with a 4-point response scale was used.

The Big Five Inventory-10 (BFI-10; Rammstedt & John, 2007) is a 10-item inventory of the Big Five personality traits: extraversion, agreeableness, consciousness, neuroticism and openness, each assessed with two items. Participants responded using a 5-point Likert response scale (1 = *completely disagree* to 5 = *completely agree*).

Statistical Analyses

Statistical analyses were performed using JASP version 0.16.2. (2022). The data were analyzed separately for each country. The dimensionality of the scales was assessed using confirmatory factor analysis. To assess model fit, the χ^2, Comparative Fit Index (CFI), Tucker Lewis Index (TLI), Root Mean Square Error of Approximation (RMSEA), and Standardized Root Mean Square (SRMR) were calculated. An RMSEA equal or lower than .05 reflects good fit, and values between .05 and .08 indicate an acceptable fit (Browne & Cudeck, 1992). CFI and TLI values above .95 indicate a good fit, while values ranging from .90 to .95 are considered acceptable (Byrne, 2010). Missing data were handled using Full Information Maximum Likelihood (FIML), which allows for the inclusion of all available data without imputing missing values. The configural, loading, and intercept invariance of the COMPIN-10 and SUCOMP-10 scales were analyzed across countries using multi-group confirmatory factor analysis (Milfont & Fischer, 2010) and interpreted based on Chen's (2007) suggested thresholds of changes ≤ .01 in CFI and GFI, ≤ .015 in RMSEA, and ≤ .030 in SRMR, as well as Cheung and Rensvold's (2002) recommendation of changes ≤ .01 in TLI.

Descriptive statistics were calculated for the scores on the COMPIN-10 and SUCOMP-10 scales. The reliability of both scales was assessed using Cronbach's alpha and McDonald's omega. Gender differences were analyzed using the *t*-test and Cohen's *d*. Age was correlated with the scales using Pearson correlations. Descriptive parameters were also calculated for the items of each scale, as well as the corrected item-total correlations and the items' contribution to the reliability estimate of the scale. Convergent validity of the COMPIN-10 and SUCOMP-10 scales were investigated by examining the Pearson correlations with the self-esteem scores on the RSES and SISES, and with the Big Five personality traits, as assessed by the BFI-10.

The Appendix, which includes the item analysis of the COMPIN-10 and SUCOMP-10 scales, and the de-identified database are available at *https://osf.io/m7294/files/osfstorage*

Results

Confirmatory Factor Analysis (CFA) of the COMPIN-10 and SUCOMP-10

The CFA was performed to test the unidimensionality of the COMPIN-10. As shown in Table 2, the χ^2 values for all countries were significant at $p < .001$. All fit indices showed acceptable values (CFI and TLI $\geq .90$; Byrne (2010); RMSEA and SRMR $\leq .08$; Browne & Cudeck (1992)) only in India and Indonesia. In other countries, CFI values were acceptable, except in Croatia and Montenegro, where the obtained values were slightly below the threshold. SRMR showed satisfactory values in all countries, while RMSEA exceeded the recommended threshold.

Table 2

CFA Fit Indices of the COMPIN-10

	CFI	TLI	RMSEA	90% CI RMSEA	SRMR	χ^2	*df*	*p*
Bosnia and Herzegovina	.90	.87	.12	[.102, .128]	.05	260.541	35	< .001
Montenegro	.89	.86	.11	[.098, .132]	.06	173.561	35	< .001
Croatia	.91	.89	.11	[.102, .127]	.05	276.657	35	< .001
India	.96	.94	.06	[.050, .080]	.04	97.203	35	< .001
Indonesia	.95	.93	.07	[.060, .090]	.04	117.007	35	< .001
North Macedonia	.89	.86	.13	[.111, .141]	.05	244.793	35	< .001
Serbia	.91	.88	.11	[.101, .128]	.05	253.170	35	< .001
Syria	.91	.88	.10	[.090, .115]	.05	236.067	35	< .001
Ukraine	.90	.87	.09	[.073, .101]	.05	153.046	35	< .001

Note. CFI = Comparative Fit Index; GFI = Goodness of Fit Index; RMSEA = Root-Mean-Square Error of Approximation; SRMR = Standardized Root-Mean-Square Residual.

Factor loadings for the COMPIN-10 items for each of the country samples are presented in Table 3. The values obtained show that the factor loadings for all items were above .40 indicating a robust unidimensional structure in all samples.

Table 3

Factor Loadings of the COMPIN-10 Items

	Bosnia and Herzegovina	Montenegro	Croatia	India	Indonesia	North Macedonia	Serbia	Syria	Ukraine
COMPIN1	.49	.51	.53	.52	.44	.55	.53	.49	.49
COMPIN2	.66	.71	.66	.70	.67	.68	.69	.65	.62
COMPIN3	.50	.52	.55	.51	.63	.68	.53	.54	.49
COMPIN4	.56	.52	.54	.54	.47	.63	.56	.56	.51
COMPIN5	.68	.63	.71	.69	.62	.67	.68	.69	.54
COMPIN6	.76	.76	.81	.70	.70	.76	.79	.75	.71
COMPIN7	.68	.67	.74	.66	.70	.73	.73	.67	.60
COMPIN8	.76	.71	.80	.71	.71	.74	.76	.71	.57
COMPIN9	.77	.77	.80	.64	.73	.80	.75	.72	.64
COMPIN10	.80	.82	.85	.67	.72	.80	.81	.78	.67

The results of the CFA for the SUCOMP-10 scale (Table 4) showed significant χ^2 values ($p < .001$) for all countries. Although certain fit indices were within acceptable ranges in some countries (e.g., CFI in Bosnia and Herzegovina and Syria, RMSEA in Syria and Ukraine, and SRMR in all countries except India), satisfactory values were not obtained for all fit indices in any of the countries tested. These findings suggest that the tested model does not fit the data well across all countries.

Table 4

CFA Fit Indices of the SUCOMP-10

	CFI	TLI	RMSEA	90% CI RMSEA	SRMR	χ^2	*df*	*p*
Bosnia and Herzegovina	.91	.88	.10	[.091, .117]	.06	218,881	35	< .001
Montenegro	.86	.82	.12	[.106, .140]	.07	193,504	35	< .001
Croatia	.88	.85	.11	[.095, .120]	.06	248,450	35	< .001
India	.65	.55	.14	[.123, .151]	.10	311,765	35	< .001
Indonesia	.80	.74	.12	[.106, .134]	.08	246,380	35	< .001
North Macedonia	.85	.81	.14	[.125, .155]	.08	294,102	35	< .001
Serbia	.84	.80	.12	[.108, .135]	.06	280,663	35	< .001
Syria	.91	.88	.08	[.067, .093]	.05	157,697	35	< .001
Ukraine	.85	.81	.08	[.063, .092]	.06	129,134	35	< .001

Note. CFI = Comparative Fit Index; GFI = Goodness of Fit Index; RMSEA = Root-Mean-Square Error of Approximation; SRMR = Standardized Root-Mean-Square Residual.

As presented in Table 5, all factor loadings for the SUCOMP-10 scale items in the samples from Bosnia and Herzegovina, Croatia, North Macedonia, and Serbia were above .40, while in other countries one or two factor loadings had somewhat lower values. Of all items, the lowest factor loadings were detected for the item SUCOMP2 ("My way of thinking is very original") in all country samples.

Table 5

Factor Loadings of the SUCOMP-10 Items

	Bosnia and Herzegovina	Montenegro	Croatia	India	Indonesia	North Macedonia	Serbia	Syria	Ukraine
SUCOMP1	.55	.41	.62	.22	.41	.53	.50	.55	.36
SUCOMP2	.56	.33	.55	.33	.28	.49	.45	.59	.33
SUCOMP3	.62	.53	.56	.41	.37	.53	.49	.58	.35
SUCOMP4	.79	.81	.77	.61	.70	.80	.80	.60	.62
SUCOMP5	.84	.82	.80	.53	.67	.85	.86	.58	.71
SUCOMP6	.71	.66	.67	.59	.64	.68	.61	.62	.51
SUCOMP7	.69	.75	.66	.55	.67	.76	.61	.60	.62
SUCOMP8	.65	.69	.60	.55	.56	.69	.53	.71	.39
SUCOMP9	.52	.51	.41	.40	.56	.63	.52	.50	.26
SUCOMP10	.56	.51	.50	.45	.47	.56	.41	.25	.36

Configural, loading, and intercept invariance were analyzed using multi-group confirmatory factor analysis (Milfont & Fischer, 2010) and interpreted based on Chen's (2007) recommendations for changes of ≤ .01 in CFI and TLI, ≤ .015 in RMSEA, and ≤ .03 in SRMR. For the COMPIN-10 scale (Table 6), the results showed that the differences in CFI (≤ .010), RMSEA (≤ .015), and SRMR (≤ .030) fell within acceptable thresholds. Although the difference in TLI slightly exceeded the typical cutoff (≤ .010), Khademi et al. (2023) suggest that such values may still be acceptable in certain contexts. Overall, these findings support the loading invariance for the unidimensional structure of the COMPIN-10 scale. However, intercept invariance was not achieved as all differences in fit indices exceeded the acceptable thresholds.

Table 6

Level of Invariance Across the Nine Samples for the COMPIN-10

	χ^2	*df*	CFI	TLI	RMSEA	SRMR	$\Delta\chi^2$	Δdf^2	ΔCFI	ΔTLI	ΔRMSEA	ΔSRMR
Configural	1812.044	315	.912	.887	.103	.045						
Loading	1973.651	387	.907	.902	.096	.063	161.607	72	.005	-.015	.007	.018
Intercept	3262.538	459	.835	.854	.117	.087	1288.887	72	.072	.048	.021	.016

Note. CFI = Comparative Fit Index; GFI = Goodness of Fit Index; RMSEA = Root-Mean-Square Error of Approximation; SRMR = Standardized Root-Mean-Square Residual.

The factor invariance analysis for the SUCOMP-10 scale (Table 7) showed that the differences in all fit indices exceeded the typical thresholds. In other words, the superiority scale did not achieve neither loading nor intercept invariance.

Table 7

Level of Invariance Across the Nine Samples for the SUCOMP-10

	χ^2	*df*	CFI	TLI	RMSEA	SRMR	$\Delta\chi^2$	Δdf^2	ΔCFI	ΔTLI	ΔRMSEA	ΔSRMR
Configural	2080.576	315	.853	.811	.112	.063						
Loading	2318.460	387	.839	.832	.106	.080	273.884	72	.014	-.021	.006	.017
Intercept	3467.648	459	.750	.779	.121	.100	1149.188	89	.089	-.053	.015	.020

Note. CFI = Comparative Fit Index; GFI = Goodness of Fit Index; RMSEA = Root-Mean-Square Error of Approximation; SRMR = Standardized Root-Mean-Square Residual.

Descriptive Statistics and Reliability Estimate of the COMPIN-10 and SUCOMP-10

Table 8 lists means, standard deviations, skewness, kurtosis, reliability coefficients, average inter-item correlations, correlations with age, and *t*-tests with Cohen's *d* to compare scale scores between men and women for the COMPIN-10 scale for each country sample. Reliability coefficients were high, ranging from .84 to .91, and the average inter-item correlations ranged from .34 to 50. Skew indices showed normal distributions for each country sample. The correlations with age were negative and significant in all samples, suggesting higher inferiority complex scores for the younger respondents. The *t*-tests revealed no significant differences, except in the Syrian sample, where women scored higher ($p < .05$) than men, but with a small effect size. Mean values indicate that the highest inferiority complex scores were found in the samples from India and Ukraine, while the lowest scores were found in the sample from North Macedonia.

Table 8

Descriptive Statistics for the COMPIN-10 Scale

	M	*SD*	S	K	α	ω	M_r	r_{age}	Gender differences	
									t	*d*
Bosnia and Herzegovina	22.39	8.47	0.54	-0.26	.89	.88	.45	-.14**	-0.044	-.004
Montenegro	21.86	8.79	0.70	-0.03	.88	.88	.44	-.20***	-0.477	-.056
Croatia	23.14	8.73	0.53	-0.33	.91	.91	.49	-.23***	-0.820	-.074
India	25.98	8.77	0.28	-0.45	.87	.87	.40	-.20***	-1.546	-.162
Indonesia	23.92	8.02	0.46	-0.18	.87	.87	.41	-.22***	-1.164	-.118
North Macedonia	20.50	8.79	0.92	0.31	.91	.90	.50	-.15**	-0.420	-.045
Serbia	22.10	8.70	0.57	-0.57	.90	.90	.47	-.13**	-0.762	-.072
Syria	23.34	8.91	0.64	-0.18	.88	.88	.43	-.19***	-2.285*	-.195
Ukraine	25.56	6.74	0.08	-0.39	.84	.84	.34	-.19***	0.905	.088

Note. S = skewness; K = kurtosis; α = Cronbach's alpha; ω = McDonald omega; M_r = average inter-item correlation; r_{age} = correlation with age; *t* = *t*-test Student-Fischer (men-women); *d* = Cohen's effect size.
*$p < .05$. **$p < .01$. ***$p < .001$.

The SUCOMP-10 scale showed satisfactory reliability coefficients in all samples, ranging from .72 to .88 (Table 9). The average correlations between the items ranged from .21 to 43. Skewness and kurtosis values indicated a normal distribution in all country samples. Weak significant correlations with age were found in Bosnia and Herzegovina, Croatia, Indonesia, and Serbia, suggesting a higher superiority complex among older respondents.

Table 9

Descriptive Statistics for the SUCOMP-10 Scale

	M	*SD*	S	K	α	ω	M_r	r_{age}	Gender differences	
									t	*d*
Bosnia and Herzegovina	28.37	8.49	0.17	-0.53	.88	.88	.42	.10*	2.567*	.233
Montenegro	31.23	8.31	0.14	-0.64	.86	.86	.37	.11	0.296	.035
Croatia	27.72	7.48	0.22	-0.09	.86	.86	.38	.16***	2.325*	.211
India	30.72	6.32	0.01	0.33	.74	.74	.22	.11*	0.498	.052
Indonesia	31.38	6.06	0.26	0.76	.81	.81	.29	.13**	0.641	.065
North Macedonia	29.47	5.88	-0.15	-0.24	.88	.88	.43	.12*	-0.897	-.096
Serbia	28.35	7.69	0.10	-0.49	.84	.84	.35	.12**	1.319	.125
Syria	32.84	6.89	-0.30	0.60	.81	.81	.31	.07	2.263*	.193
Ukraine	29.14	5.38	-0.03	0.21	.72	.72	.21	.02	-0.910	-.089

Note. S = skewness; K = kurtosis; α = Cronbach's alpha; ω = McDonald omega; M_r = average inter-item correlation; r_{age} = correlation with age; *t* = *t*-test Student-Fischer (men-women); *d* = Cohen's effect size. $^{*}p < .05$. $^{**}p < .01$. $^{***}p < .001$.

Item statistics are presented in Appendix Tables A3 and A4 for the COMPIN-10 and SUCOMP-10 scales respectively. The lowest mean and standard deviation values for COMPIN-10 item 5 ("During work I keep telling myself, I won't make it, so it would be better if I didn't start at all.") were found in almost all country samples. Kurtosis values greater than |2.00| and skewness values greater than |1.00| were used to assess normality, with values exceeding these thresholds indicating deviations from normality (Muthén & Kaplan, 1985). Almost all COMPIN-10 items in the country samples had acceptable skewness and kurtosis values, except in the North Macedonian sample, where some items deviated from normality.

For the SUCOMP-10, items 2 ("My way of thinking is very original.") and 3 ("I can withstand and work more than most people.") showed the highest mean values, while item 9 ("The worst thing would be if there weren't people like me.") had the lowest mean value in all country samples. The skewness indices suggested a normal distribution for most items across the samples.

Convergent Validity of the COMPIN-10 and SUCOMP-10

Pearson's correlation was calculated to examine the associations between the COMPIN-10 and SUCOMP-10 scores (Table 10). Negative significant correlations were found for most country samples, with the exception of the sample from Montenegro, which showed a non-significant correlation, and the sample from India, which showed a positive correlation between inferiority and superiority.

Pearson's correlation with the SISES and the RSES demonstrated good convergent validity for the COMPIN-10 in all country samples. For the SUCOMP-10, the correlation with the SISES was not significant for the sample from North Macedonia. Overall, the correlations with both the COMPIN-10 and the SUCOMP-10 were higher than with the RSES, except for the sample from Serbia. The convergent validity of the COMPIN-10 and SUCOMP-10 scales was also confirmed by their correlations with the Big Five personality traits. The Inferiority complex correlated positively with neuroticism, and negatively with extraversion, agreeableness, and conscientiousness in almost all countries, while the superiority complex correlated positively with extraversion and conscientiousness. These findings replicate those reported by Čekrlija et al. (2023), confirming the good convergent validity of the COMPIN-10 and SUCOMP-10 scales.

Table 10

Correlations Between the COMPIN-10 and SUCOMP-10 Scale Scores, and Correlations with SISES, RSES and BFI-10 Scales' Scores

	r	COMPIN-10							SUCOMP-10						
		SISES	RSES	N	E	A	C	O	SISES	RSES	N	E	A	C	O
Bosnia and Herzegovina	-.11	-.49*	-.72*	.31*	-.18*	-.32*	-.35*	-.21*	.29*	.15*	-.06	.14*	-.05	.21*	.17*
Montenegro	-.02	-.52*	-.69*	.35*	-.30*	-.15*	-.09	-.09	.35*	.21*	-.09	.35*	.10	.05	.10
Croatia	-.18*	-.60*	-.79*	.42*	-.26*	-.38*	-.39*	.00	.30*	.24*	-.01	.18*	.04	.24*	.16*
India	.08	-.18*	-.45*	.18*	-.33*	-.04	-.23*	-.22*	.25*	.22*	.09	.16*	.12	.25*	.06
Indonesia	-.18*	-.28*	-.37*	.44*	-.34*	-.33*	-.49*	-.05	.28*	.37*	-.23*	.16*	-.11	.28*	.17*
North Macedonia	-.20*	-.46*	-.75*	.33*	-.16*	-.09	-.38*	.01	-.01	.29*	-.03	.13	-.17*	.22*	.09
Serbia	-.22*	-59*	-.32*	.44*	-.32*	-.28*	-.29*	-.06	.33*	.12	-.07	.24*	-.05	.29*	.12*
Syria	-.25*	-.51*	-.73*						.34*	.36*					
Ukraine	-.24*	-.39*	.36*	.26*	-.48*	-.00	-.24*	-.10*	-.64*	.29*	-.08	.22*	.10	.18*	.05

Note. r = correlation between scores on COMPIN-10 and SUCOMP-10 scales; RSES = Rosenberg Self-Esteem Scale (Rosenberg, 1965); SISES = Single-Item Self-Esteem Scale (Robins et al., 2001). N = Neuroticism; E = Extraversion; A = Agreeableness; C = Conscientiousness; O = Openness.
*$p < .01$.

Discussion

The aim of the present study was to introduce the short 10-item inferiority complex scale titled COMPIN-10, and the short 10-item superiority complex scale titled SUCOMP-10 in nine countries and to examine their psychometric properties. It was predicted that both scales would show a stable single-factor structure, satisfactory reliability, and meaningful correlations with self-esteem measures and Big Five personality traits for each of the country samples.

All factor loadings obtained through confirmatory factor analysis exhibited substantial values, indicating that the COMPIN-10 items represent a coherent set and suggest a single-factor solution for the scale across countries. However, acceptable fit index values (CFI and TLI $\geq$ .90; Byrne, 2010; RMSEA and SRMR $\leq$ .08; Browne & Cudeck, 1992) were only observed in India and Indonesia, while they fell slightly below the threshold in other countries. In these countries, the TLI values were slightly below the recommended threshold, while the RMSEA exceeded the acceptable limit in all cases, suggesting that the sample's residual covariance matrix did not align well with the hypothesized model. These findings imply that certain items may be interpreted differently in different cultures or that translation issues may have responses in some countries. Therefore, it is necessary to further examine the national translations and compare them with the original version to ensure measurement consistency. Furthermore, the factor invariance analysis indicated that the COMPIN-10 scale met the criteria for loading invariance, but not for configural or intercept invariance. Interestingly, the results of measurement invariance testing showed that the loading invariance model demonstrated a higher TLI value than the configural model, which is an uncommon outcome. Typically, adding constraints (such as equal factor loadings across groups) results in a decrease in fit indices (Cheung & Rensvold, 2002). In this case, however, increasing the degrees of freedom (*df*) through the loading model appears to have improved the relative fit adjustment of TLI, suggesting that the configural model may have been overfitting due to the freely estimated factor loadings. Furthermore, although the Chi-square value increased when moving from configural to loading invariance (as expected due to added constraints), the fact that TLI improved suggests that constraining factor loadings provided a more stable and parsimonious model. This interpretation is supported by the relatively small differences in factor loadings across countries, indicating that loading invariance is likely a reasonable assumption. Importantly, CFI and RMSEA followed the expected pattern, decreasing slightly with loading invariance and remaining within acceptable thresholds (ΔCFI $\leq$ .01, ΔRMSEA $\leq$ .015). Therefore, despite the unusual TLI pattern, the overall results support a loading invariance of the scale in the countries tested. An unexpected pattern was also observed in the Chi-square difference test, where the intercept model yielded a lower Chi-square value than the loading model. While adding intercept constraints typically increases Chi-square, this decrease could indicate that the loading model was overfitting or that the intercept constraints in the intercept model helped stabilize

the estimation. However, the increase in TLI, CFI, and RMSEA beyond acceptable thresholds (ΔCFI > .01, ΔRMSEA > .015) indicates that full intercept invariance was not supported. This suggests that some item intercepts differ from country to country, potentially reflecting cultural or linguistic differences in item interpretation. As a result, direct comparisons of latent means may be biased, and further investigation is needed into the specific items contributing to these differences.

When testing for factor invariance of the SUCOMP-10 scale, unexpected patterns were also observed in the TLI and the Chi-square difference tests. The TLI was higher in the loading model than in the configural model, while the Chi-square value was higher in the loading model compared to the configural model, and highest in the intercept model. However, the differences in TLI values exceeded the acceptable threshold (ΔTLI $\leq$ .01) for both loading and intercept invariance. Although the differences in RMSEA and SRMR values were within the acceptable range of change (ΔRMSEA $\leq$ .015, ΔSRMR $\leq$ .030), and the difference in CFI was still within the acceptable range of changes according to Khademi et al. (2023), the overall results suggest that full loading and intercept invariance was not supported. In general, the findings suggest that some item intercepts differ across countries reflecting potential cultural differences in item interpretation or translation issues in some countries. The results of the CFA for the SUCOMP-10 scale per country showed that no fully acceptable values were obtained for all fit indices in any of the countries tested, suggesting that the unidimensional model is not correct. Additionally, only in four countries did the factor loading for all items have substantial values, while in the remaining countries at least one item had a lower factor loading with a value < .40. Furthermore, the factor loadings and factor intercepts were not equal across all countries, suggesting that some behaviors described by the SUCOMP-10 items are interpreted differently across cultures. In some countries, for example, emphasizing personal competencies may be seen as a demonstration of self-confidence rather than an expression of superiority. In general, aspects of inferiority and superiority complexes, such as humility or competitiveness, are thought to be influenced by societal values and interpretations that reflect differences in the assessment of these complexes. As noted by Čekrlija et al. (in press), some items within the SUCOMP-10 scale may require improvement, as they currently contain potential flaws. For example, item SUCOMP1 ("When I do something, it is important to me to be the best, and I mostly manage to be.") could be refined by simplifying the statement, as its current form contains two ideas that could confuse respondents. Additionally, item SUCOMP2 ("My way of thinking is very original."), which had the lowest factor loading across all country samples, and item SUCOMP9 ("The worst thing would be if there weren't people like me.") are unclear as to whether they primarily indicate superiority or narcissism. This ambiguity may contribute to their lower factor loadings compared to other items on the superiority scale. In light of these concerns, a thorough reexamination of these items is necessary, and their revision is likely required to improve the overall quality and validity of the scale. Finally, translation issues could also contribute to items

being understood differently across groups, leading to inconsistent factor loadings (loading invariance problems) and different item intercepts (intercept invariance problems). Given this, it is necessary to re-examine the national translations of the SUCOMP-10 scale.

As both the COMPIN-10 and the SUCOMP-10 scales did not achieve intercept invariance across countries, it was not appropriate to conduct cross-national comparisons of the inferiority and superiority levels. The failure to establish intercept invariance indicates that item intercepts differ from country to country, meaning that observed differences in the scores may reflect measurement bias rather than true differences in the constructs. Therefore, any comparison of inferiority and superiority levels across cultures would not provide undoubtedly valid or reliable results.

The reliability coefficients were good for both scales in each country sample, confirming the second hypothesis, while the average inter-item correlations provided additional evidence of good reliability for both scales. Finally, both scales showed the expected correlations with self-esteem measures and the Big Five personality traits, providing strong evidence for their convergent validity. As hypothesized, the inferiority complex, assessed with the COMPIN-10 scale showed significant negative correlations, whereas the superiority complex, assessed with the SUCOMP-10 scale, showed significant positive correlations with self-esteem in all samples. It is interesting to note that the correlation values varied across countries, confirming that the inferiority and superiority complex may be perceived differently across countries. Therefore, the potential differences in the evaluation of inferiority and superiority in different cultures remain a research problem worth considering. The hypotheses regarding the associations of inferiority and superiority with the Big Five personality traits were also confirmed across countries, adding support for the convergent validity of the COMPIN-10 and SUCOMP-10 scales. Inferiority complex scores had strong positive correlations with neuroticism and negative correlations with extraversion, agreeableness and conscientiousness, while superiority complex scores correlated positively with extraversion and conscientiousness. These correlations strongly support the findings of Čekrlija et al. (2023), who confirm that a higher inferiority complex is related to being anxious, vulnerable, preoccupied with negative emotions, less engaged in social activities, less willing to express oneself, and having a lower sense of community. Conversely, individuals with a higher superiority complex are confirmed to be more sociable, committed to their goals, thoughtful, and exhibit higher perseverance. Finally, it should be noted that certain differences in correlations can be observed in the Indian sample compared to other countries. These differences may be due in part to translation issues that affect the cultural and linguistic appropriateness of the measures. Given the potential impact of linguistic nuances on the interpretation of the items, it is recommended that the translation be re-examined and refined to ensure cultural and linguistic appropriateness.

In terms of gender differences, women scored significantly higher on the inferiority complex only in Syrian sample, while men scored significantly higher on

superiority complex in the samples from Bosnia and Herzegovina, Croatia, and Syria, which corresponds with Adler's presumptions regarding gender-typical traits (Oberst & Stewarts, 2003). However, the weak effect sizes and the lack of significant differences in the other countries sampled do not allow for a generalization of these findings. These findings are in line with the conclusion that studies so far have provided inconsistent findings regarding gender differences in inferiority and superiority (Derin & Şahin, 2023b), preventing any general conclusions. How gender differences in feelings of inferiority and superiority might change due to cultural factors, such as the social desirability of gender-based behavior, as suggested by social role theory (Eagly & Wood, 2016), is an area that requires further investigation.

With respect to age, we found that the inferiority complex decreased slightly with age in all country samples, whereas the superiority complex increased only marginally in older participants in most samples. These results are generally consistent with Adlerian theory of personality and the findings that self-esteem increases steadily from adolescence to old age (Robins et al., 2002). It is suggested that as people age, they learn to use different strategies to avoid unpleasant and stressful situations and develop coping mechanisms that help maintain a positive self-image.

Limitations

The present study was limited by the varying age range of the participants in the national samples. Since inferiority showed negative correlation, and superiority showed positive correlation with age in most country samples, future research should closely examine the effects of age when examining scale properties. Another limitation is that more women are represented in all country samples, so that more balanced samples should be used in future studies. The present study also relied solely on self-report measures, which couldimpact the results due to socially desirable answers and consequently limit the ecological validity of the findings. Future research may want to include observational data or peer reports in the assessment of inferiority and superiority complexes, as well as additional measures associated with these traits. Moreover, the content of some items such as SUCOMP2 should probably be revised. Additionally, the translation of some items, such as SUCOMP1 in India or SUCOMP9, should be reviewed as they could be improved if possible.

Conclusion

Overall, the findings indicate that the short measures of the inferiority and superiority complexes, the COMPIN-10 and SUCOMP-10 scales, demonstrate good reliability and exhibit reasonable associations with measures of personality traits,

confirming their convergent validity. However, they do not display a robust, generalizable unidimensional structure. While the COMPIN-10 scale appears to represent a coherent set of items with a unidimensional structure, it is not suitable for cross-cultural comparisons. Therefore, further refinement is necessary to determine whether the scale can be improved to achieve loading and intercept invariance. Regarding the SUCOMP-10 scale, the results suggest that further improvements are needed. Some items should be simplified or revised to enhance lexical clarity and ensure they serve as more precise indicators of superiority. Finally, the translation of certain items in both scales should be reviewed, as refinements may be necessary in some countries.

Funding/Financial Disclosure: This research received no external funding.

Disclosure Interests: Authors declare no competing interest.

Ethical Practice: The study was approved by the Department of Psychology and the Faculty of philosophy of the University of Banja Luka (19.10.2022) and conducted according to the guidelines of the Declaration of Helsinki. Informed consent was obtained from all subjects involved in the study.

Data Availability Statement: De-identified data and the Appendix are publicly available at the *https://osf.io/v3h4m/*

References

Adler, A. (1938, reprinted 2011). *Social interest: A challenge to mankind.* Martino Fine Books.

Adler, A. (1945). *Understanding human nature*. Garden City Publishing Company.

Adler, A. (1952). *Science of living.* George Allen & Unwin Publisher.

Anderson, C., Hildreth, J. A. D., & Howland, L. (2015). Is the desire for status a fundamental human motive? A review of the empirical literature. *Psychological Bulletin, 141*(3), 574–601. https://doi.org/10.1037/a0038781

Ansbacher, H. L., & Ansbacher, R. R. (1956): *The individual psychology of Alfred Adler*. Basic Books, inc.

Arranz-Freijo, E., & Barreto-Zarza, F. (2021). The contributions of Alfred Adler (1870–1937) to the understanding of early childhood development. *Early Child Development and Care, 191*(7–8), 1133–1143. https://doi.org/10.1080/03004430.2020.1851215

Ashby, J. S., & Kottman, T. (1996). Inferiority as a distinction between normal and neurotic perfectionism. *Individual Psychology*, *52*(3), 237–245.

Browne, M. W., & Cudeck, R. (1992). Alternative ways of assessing model fit. *Sociological Methods & Research, 21*(2), 230–258. https://doi.org/10.1177/0049124192021002005

Byrne, B. M. (2010). *Structural equation modeling with AMOS: Basic concepts, applications, and programming* (2nd ed.). Routledge. https://doi.org/10.4324/9780203805534

Chen, F. F. (2007). Sensitivity of goodness of fit indexes to lack of measurement invariance. *Structural Equation Modeling: A Multidisciplinary Journal, 14*(3), 464–504. https://doi.org/10.1080/10705510701301834

Cheung, G. W., & Rensvold, R. B. (2002). Evaluating goodness-of-fit indexes for testing measurement invariance. *Structural Equation Modeling: A Multidisciplinary Journal, 9*(2), 233–255. https://doi.org/10.1207/S15328007SEM0902_5

Coleman, R. L., & Croake, J. W. (1987). Organ inferiority and measured overcompensation. *Individual Psychology*, *43*(3), 364–369.

Čekrlija, Đ., Đurić, D., & Mirković, B. (2017). Validation of Adlerian inferiority (COMPIN) and superiority (SUCOMP) complex shortened scales. *Civitas, 7*(2), 13–35. https://doi.org/10.5937/Civitas1701013C

Čekrlija, Đ., Patel, J., & Schermer, J. A. (in press). Examining the psychometric properties of an English translation of the Shortened Inferiority and Superiority Complex Scales. *Journal of Individual Psychology.*

Čekrlija, Đ., Roković, M. N., Dinić, B. N., & Schermer, J. A. (2023). Relationship between inferiority and superiority complex and dark triad personality traits. *Personality and Individual Differences*, *206*, Article 112123. https://doi.org/10.1016/j.paid.2023.112123

Čekrlija, Đ., Roković, M. N., Shereena, M. A., Kok, S., & Vujaković, L. (2020). *Preliminary psychometric properties of the Inferiority Complex Scale (COMPIN-10) in Bosnian-Herzegovinian, Serbian, Indian and Malaysian culture.* Poster presented at 16th days of Applied Psychology, Niš, Serbia. https://www.psihologijanis.rs/dpp/arhiva/DPP2020.pdf

Čekrlija, Đ., Vlašić, A., Selaković, S., Marijanović, J., Ivanišević, D., & Vujaković, L. (2018). Relacije kompleksa inferiornosti, superiornosti i infantilne inferiornosti sa osobinama alternativnog petofaktorskog modela ličnosti [Relationships of inferiority, superiority and infantile inferiority complex with personality traits from the Alternative Five-Factor Model]. *Zbornik radova 3. Otvoreni dani psihologije*, 155–190.

Derin, S. & Şahin, E. S. (2023a). Turkish version of the Adlerian inferiority and superiority complex shortened scales: Validity and reliability. *Psihologija, 57*(1), 21–39. https://doi.org/10.2298/PSI220522006D

Derin, S. & Şahin, E. S. (2023b). Inferiority and superiority complex: Examination in terms of gender, birth order and psychological symptoms. *Primenjena psyhologija, 16*(3), 375–401. https://doi.org/10.19090/pp.v16i3.2463

Eagly, A. H., & Wood, W. (2016). Social role theory of sex differences. In N. Naples, R. C. Hoogland, M. Wickramasinghe, & W. C. A. Wong (Eds.), *The Wiley Blackwell Encyclopedia of Gender and Sexuality Studies* (pp. 459–466). Wiley. https://doi.org/10.1002/9781118663219.wbegss183

Ferreira, C., Pinto-Gouveia, J., & Duarte, C. (2013). Drive for thinness as a women's strategy to avoid inferiority. *International Journal of Psychology and Psychological Therapy*, *13*(1), 15–29. https://www.ijpsy.com/volumen13/num1/344/drive-for-thinness-as-a-womens-strategy-EN.pdf

Ignjatović, I., Momirović, K., & Hošek, A. (1995). Taksonomska efikasnost infantilne inferiornosti, kompleksa inferiornosti i kompleksa superiornosti [Taxonomic efficacy of the infantile inferiority, inferiority complex and superiority complex]. In K. Momirović (Ed.), *Psychology of Crime 2* (pp. 111–133). Institute for Criminological and Sociological Research Belgrade.

JASP Team (2022). *JASP version 0.16.2.* [Computer software].

Jonason, P. K., & Webster, G. D. (2010). The dirty dozen: A concise measure of the dark triad. *Psychological Assessment, 22*(2), 420–432. https://doi.org/10.1037/a0019265

Johnson, D. D., & Fowler, J. H. (2011). The evolution of overconfidence. *Nature, 477*(7364), 317–320. https://doi.org/10.1038/nature10384

Khademi, A., Wells, C. S., Oliveri, M. E., & Villalonga-Olives, E. (2023). Examining appropriacy of CFI and TLI cutoff value in multiple-group CFA test of measurement invariance to enhance accuracy of test score interpretation. *SAGE Open, 13*(4). https://doi.org/10.1177/21582440231205354

Kolisnyk, L., Čekrlija, Đ., & Kalagurka, B. (2020). Peculiarities of superiority and inferiority complexes of Ukrainians. *Mental Health: Global Challenges Journal, 3*(2), Article 38. https://doi.org/10.32437/mhgcj.v4i2.86

Kottman, T., & Heston, M. (2012). The child's inner life and a sense of community. In J. J. Carlson & M. Maniacci (Eds.), *Alfred Adler revisited* (pp. 113–121). Taylor & Francis.

Kowalski, C. M., Rogoza, R., Saklofske, D. H., & Schermer, J. A. (2021). Dark triads, tetrads, tents, and cores: Why navigate (research) the jungle of dark personality models without a compass (criterion)? *Acta Psychologica, 221*, Article 103455. https://doi.org/10.1016/j.actpsy.2021.103455

Maniacci, M. P. (2007). His majesty the baby: Narcissism through the lens of individual psychology. *Journal of Individual Psychology, 63*(2), 136–145.

Mitrović, D. (1998). *Dimenziona provera egzistencije konstrukata infantilna inferiornost, kompleks inferiornosti i kompleks superiornosti proisteklih iz individualno-psihološke teorije Alfreda Adlera* [Dimensional verification of the existence of infantile inferiority, inferiority complex and superiority complex, as constructs derived from the individual-psychological theory of Alfred Adler]. [Unpublished Master thesis]. Faculty of philosophy, Novi Sad, Serbia.

Milfont, T. L., & Fischer, R. (2015). Testing measurement invariance across groups: Applications in cross-cultural research. *International Journal of Psychological Research, 3*, 111–130. https://doi.org/10.21500/20112084.857

Muthèn, B., & Kaplan, D. (1985). A comparison of some methodologies for the factor analysis of non-normal Likert variables. *British Journal of Mathematical and Statistical Psychology, 38*(2), 171–189. https://doi.org/10.1111/j.2044-8317.1985.tb00832.x

Oberst, U. E., & Stewart, A. E. (2003). *Adlerian psychotherapy: An advanced approach to individual psychology.* Taylor and Francis Ltd. https://doi.org/10.4324/9781315820262

Paulhus, D. L., Westlake, B. G., Calvez, S. S., & Harms, P. (2013). Self-presentation style in job interviews: The role of personality and culture. *Journal of Applied Social Psychology, 43*, 2042–2059. https://doi.org/10.1111/jasp.12157

Papanek, H. (1965). Superiority and social interest by Alfred Adler. *International Journal of Group Psychotherapy, 15*(4), 537–539. https://doi.org/10.1080/00207284.1965.11642890

Rammstedt, B., & John, O. P. (2007). Measuring personality in one minute or less: A 10-item short version of the Big Five Inventory in English and German. *Journal of Research in Personality, 41*(1), 203–212. https://doi.org/10.1016/j.jrp.2006.02.001

Robins, R. W., Hendin, H. M., & Trzesniewski, K. H. (2001). Measuring global self-esteem: Construct validation of a single-item measure and the Rosenberg Self-Esteem Scale. *Personality and Social Psychology Bulletin, 27*, 151–161. https://doi.org/10.1177/0146167201272002

Robins, R. W., Trzesniewski, K. H., Tracy, J. L., Gosling, S. D., & Potter, J. (2002). Global self-esteem across the life span. *Psychology and Aging, 17*(3), 423–434. https://doi.org/10.1037/0882-7974.17.3.423

Rogoza, R., Żemojtel-Piotrowska, M., Rogoza, M., Piotrowski, J. P., & Wyszyńska, P. (2016). Narcissistic admiration and rivalry in the context of personality metatraits. *Personality and Individual Differences, 102*, 180–185. https://doi.org/10.1016/j.paid.2016.07.003

Rosenberg, M. (1965). *Society and the adolescent self-image.* Princeton University Press.

Ruk, Đ., & Momčilov, D. (1996). Relacije između kompleksa superiornosti merenog skalom SUCOMP i Eysenckovih dimenzija ličnosti EPQ [Relations between superiority complex, measured by the SUCOMP scale, and Eysenck`s personality dimensions]. In L. Genc & I. Ignjatović (Eds.), *Ličnost u višekulturalnom duštvu 3* [Personality in multicultural society 3] (pp. 167–176). Filozofski fakultet, Univerzitet u Novom Sadu, Srbija.

Sadiq, R., Asif, Z., & Hameed, S. (2023). Translation and adaptation of Inferiority Complex Scale (ICS-10). *Annals of Human and Social Sciences, 4*(2), 490–498. https://doi.org/10.35484/ahss.2023(4-II)45

Yao, S. N., & Cottraux, J. (2002). Le sentiment d'infériorité entre population normale et anxieuse [Inferiority in normal and anxious populations]. *L'Encephale*, *28*(4), 321–327.

Yao, S. N., Cottraux, J., Martin, R., Mollard, E., Bouvard, M., Guérin, J., & Hanauer, M. T. (1998). Inferiority in social phobics, obsessive-compulsives, and non-clinical controls. A controlled study with the inferiority scale. In E. Sanavio (Ed.), *Behavior and cognitive therapy today* (pp. 305–318). Pergamon. https://doi.org/10.1016/B978-008043437-7/50025-9

Ispitivanja skala COMPIN-10 i SUCOMP-10: Mjerenje kompleksa inferiornosti i superiornosti u devet zemalja

U ovome se radu predstavljaju ispitivanja kratkih ljestvica kompleksa inferiornosti (COMPIN-10) i kompleksa superiornosti (SUCOMP-10). Sudionici (N = 4010; 57 % žena) iz devet zemalja u dobi između 18 i 77 godina (M = 29.68, SD = 10.62) mrežnim su putem ispunili ljestvice na svojim materinskim jezicima. Ispitane su pouzdanost, dimenzionalnost i konvergentna valjanost ljestvica. Potvrđeni su zadovoljavajući koeficijenti pouzdanosti za obje ljestvice. Jednodimenzijsku strukturu ljestvice COMPIN-10 podržali su uzorci iz različitih zemalja, dok ljestvica SUCOMP-10 nije pokazala jednodimenzijsku strukturu. Osim toga, rezultati su ukazali na to da je ljestvica COMPIN-10 postigla jedino invarijantnost opterećenja, dok se kod ljestvice SUCOMP-10 nije pokazala invarijantnost među zemljama. Rezultati na ljestvici inferiornosti bili su negativno povezani s mjerama samopoštovanja, ekstraverzijom, ugodnošću i savjesnošću, a rezultati na ljestvici superiornosti bili su pozitivno povezani s mjerama samopoštovanja, ekstraverzijom i savjesnošću, što potvrđuje konvergentnu valjanost obiju ljestvica u uzorcima svih zemalja. Rezultati ove višenacionalne studije pokazuju da je ljestvica COMPIN-10 robusniji istraživački instrument; međutim, preporučuju se daljnja revizija i usavršavanje obiju ljestvica.

Ključne riječi: kompleks inferiornosti, kompleks superiornosti, ljestvica COMPIN-10, ljestvica SUCOMP-10, psihometrijska svojstva, Adler

Primljeno: 30. 7. 2024.

Appendix

Table A1

Inferiority Complex Scale (COMPIN-10)

1. I do not know how to use my competences at the right moment.
2. I know that I underestimate myself, but I cannot deal with it.
3. Usually, my performance is under average because I do not like to be intrusive.
4. I cannot express myself and keep the people I love by my side.
5. During work I keep telling myself, I won't make it, so it would be better if I didn't start at all.
6. I often feel that I will not be able to do what is expected.
7. I am easily inhibited by failure, and I find it difficult to go on.
8. I often feel that I am not ready for things that I must do.
9. I do not respect myself enough.
10. I am not self-confident.

Table A2

Superiority Complex Scale (SUCOMP-10)

1. When I do something, it is important to me to be the best, and I mostly manage to be.
2. My way of thinking is very original.
3. I can withstand and work more than most people.
4. Few people have had as much success as I have.
5. Few people can compare with me.
6. What is just an ordinary thing to me, many people would consider success.
7. Normally, no solution can be found without me.
8. Sometimes I don't fulfill my own expectations, but I know that others would not achieve even that much.
9. The worst thing would be if there weren't people like me.
10. When I want something, I make it clear to everybody.

Table A3

Descriptive Parameters for COMPIN-10 Items Across Countries

Country		*M*	*SD*	Skewness	Kurtosis	Corrected item-total correlation
Bosnia-Herzegovina	COMPIN1	2.81	1.09	0.07	-0.43	.48
	COMPIN2	2.39	1.20	0.41	-0.80	.65
	COMPIN3	2.16	1.19	0.80	-0.31	.50
	COMPIN4	2.21	1.29	0.71	-0.70	.55
	COMPIN5	1.70	1.03	1.48	1.45	.64
	COMPIN6	2.18	1.18	0.76	-0.34	.70
	COMPIN7	2.28	1.23	0.65	-0.58	.64
	COMPIN8	2.32	1.32	0.64	-0.75	.70
	COMPIN9	2.18	1.27	0.74	-0.60	.70
	COMPIN10	2.16	1.13	0.72	-0.30	.73
Montenegro	COMPIN1	2.74	1.18	0.08	-0.76	.49
	COMPIN2	2.26	1.20	0.51	-0.82	.68
	COMPIN3	2.26	1.33	0.70	-0.77	.52
	COMPIN4	2.31	1.39	0.69	-0.81	.50
	COMPIN5	1.68	1.13	1.68	1.85	.60
	COMPIN6	2.07	1.24	0.96	-0.11	.70
	COMPIN7	2.14	1.22	0.83	-0.30	.63
	COMPIN8	2.19	1.34	0.83	-0.55	.64
	COMPIN9	2.17	1.29	0.75	-0.66	.70
	COMPIN10	2.04	1.20	0.91	-0.22	.75
Croatia	COMPIN1	2.84	1.11	0.05	-0.71	.52
	COMPIN2	2.57	1.16	0.28	-0.74	.64
	COMPIN3	2.04	1.07	0.83	-0.03	.54
	COMPIN4	2.10	1.12	0.76	-0.28	.53
	COMPIN5	1.74	1.06	1.39	1.11	.67
	COMPIN6	2.34	1.25	0.56	-0.76	.75
	COMPIN7	2.40	1.23	0.54	-0.73	.69
	COMPIN8	2.46	1.32	0.42	-1.03	.75
	COMPIN9	2.37	1.28	0.50	-0.85	.75
	COMPIN10	2.29	1.19	0.58	-0.63	.80
India	COMPIN1	3.10	1.19	-0.13	-0.84	.48
	COMPIN2	2.36	1.24	0.62	-0.69	.66
	COMPIN3	2.78	1.23	0.19	-0.97	.48
	COMPIN4	2.47	1.31	0.44	-1.06	.51
	COMPIN5	2.53	1.34	0.39	-1.05	.64
	COMPIN6	2.85	1.29	0.09	-1.16	.65
	COMPIN7	2.63	1.33	0.44	-0.99	.61
	COMPIN8	2.67	1.37	0.29	-1.22	.66
	COMPIN9	2.27	1.27	0.73	-0.56	.60
	COMPIN10	2.30	1.29	0.70	-0.66	.62

Country		*M*	*SD*	Skewness	Kurtosis	Corrected item-total correlation
Indonesia	COMPIN1	2.68	1.07	0.13	-0.63	.41
	COMPIN2	2.58	1.23	0.30	-1.02	.64
	COMPIN3	2.58	1.19	0.38	-0.84	.60
	COMPIN4	2.63	1.30	0.29	-1.06	.44
	COMPIN5	1.75	1.01	1.34	1.20	.58
	COMPIN6	2.30	1.19	0.62	-0.57	.65
	COMPIN7	2.25	1.10	0.62	-0.48	.64
	COMPIN8	2.62	1.17	0.29	-0.83	.64
	COMPIN9	2.13	1.20	0.81	-0.44	.66
	COMPIN10	2.42	1.26	0.55	-0.77	.67
North Macedonia	COMPIN1	2.70	1.28	0.15	-1.12	.54
	COMPIN2	2.35	1.25	0.56	-0.78	.67
	COMPIN3	1.96	1.18	1.05	-0.03	.66
	COMPIN4	2.16	1.22	0.73	-0.62	.62
	COMPIN5	1.64	1.01	1.69	2.23	.64
	COMPIN6	2.06	1.22	0.89	-0.34	.73
	COMPIN7	1.73	1.06	1.50	1.58	.68
	COMPIN8	1.97	1.17	1.08	0.20	.68
	COMPIN9	2.00	1.26	1.02	-0.18	.73
	COMPIN10	1.94	1.22	1.13	0.17	.74
Serbia	COMPIN1	2.70	1.13	0.20	-0.67	.52
	COMPIN2	2.45	1.23	0.40	-0.89	.68
	COMPIN3	1.81	0.97	0.95	-0.12	.53
	COMPIN4	2.09	1.25	0.86	-0.45	.55
	COMPIN5	1.68	1.03	1.52	1.48	.63
	COMPIN6	2.14	1.20	0.80	-0.44	.73
	COMPIN7	2.34	1.28	0.57	-0.85	.68
	COMPIN8	2.39	1.38	0.58	-0.96	.72
	COMPIN9	2.37	1.32	0.61	-0.80	.70
	COMPIN10	2.13	1.16	0.79	-0.33	.75
Syria	COMPIN1	2.69	1.19	0.23	-0.82	.47
	COMPIN2	2.72	1.35	0.18	-1.24	.61
	COMPIN3	2.37	1.24	0.57	-0.73	.51
	COMPIN4	2.61	1.41	0.34	-1.25	.54
	COMPIN5	1.89	1.16	1.29	0.75	.64
	COMPIN6	2.27	1.28	0.68	-0.74	.69
	COMPIN7	1.96	1.16	1.08	0.23	.63
	COMPIN8	2.33	1.23	0.54	-0.80	.65
	COMPIN9	2.18	1.34	0.77	-0.77	.67
	COMPIN10	2.32	1.37	0.67	-0.85	.72

Country		*M*	*SD*	Skewness	Kurtosis	Corrected item-total correlation
Ukraine	COMPIN1	2.42	1.00	0.41	-0.47	.46
	COMPIN2	2.91	1.11	-0.09	-1.14	.57
	COMPIN3	2.86	1.12	0.04	-0.92	.45
	COMPIN4	2.27	1.04	0.45	-0.58	.46
	COMPIN5	2.06	1.03	0.67	-0.58	.49
	COMPIN6	2.59	1.02	0.27	-0.66	.65
	COMPIN7	2.91	1.08	0.03	-0.90	.54
	COMPIN8	2.69	1.03	0.16	-0.96	.51
	COMPIN9	2.38	1.07	0.56	-0.48	.57
	COMPIN10	2.46	1.08	0.58	-0.45	.60

Table A4

Descriptive Parameters for SUCOMP-10 Items Across Countries

Country		*M*	*SD*	Skewness	Kurtosis	Corrected item-total correlation
Bosnia-Herzegovina	SUCOMP1	3.40	1.14	-0.43	-0.57	.52
	SUCOMP2	3.67	1.04	-0.47	-0.24	.54
	SUCOMP3	3.64	1.10	-0.46	-0.48	.58
	SUCOMP4	2.56	1.20	0.30	-0.75	.70
	SUCOMP5	2.49	1.29	0.48	-0.80	.75
	SUCOMP6	2.89	1.30	0.08	-0.99	.66
	SUCOMP7	2.22	1.15	0.56	-0.55	.65
	SUCOMP8	2.44	1.30	0.43	-0.96	.63
	SUCOMP9	2.09	1.33	0.94	-0.34	.50
	SUCOMP10	2.97	1.35	-0.03	-1.11	.56
Montenegro	SUCOMP1	3.58	1.14	-0.49	-0.47	.44
	SUCOMP2	3.96	1.02	-0.68	-0.20	.37
	SUCOMP3	3.95	1.05	-0.74	-0.30	.51
	SUCOMP4	2.83	1.25	0.12	-0.88	.68
	SUCOMP5	2.70	1.32	0.20	-1.09	.70
	SUCOMP6	3.20	1.29	-0.16	-0.97	.61
	SUCOMP7	2.48	1.27	0.35	-0.97	.69
	SUCOMP8	2.71	1.29	0.17	-1.04	.64
	SUCOMP9	2.48	1.54	0.53	-1.22	.49
	SUCOMP10	3.36	1.34	-0.26	-1.08	.52
Croatia	SUCOMP1	3.40	1.01	-0.44	-0.11	.57
	SUCOMP2	3.52	1.00	-0.29	-0.14	.52
	SUCOMP3	3.63	1.09	-0.50	-0.30	.52
	SUCOMP4	2.50	1.14	0.34	-0.62	.66
	SUCOMP5	2.36	1.14	0.50	-0.52	.70
	SUCOMP6	2.91	1.21	0.04	-0.87	.62
	SUCOMP7	2.09	1.03	0.65	-0.26	.63
	SUCOMP8	2.42	1.14	0.43	-0.58	.57
	SUCOMP9	1.95	1.19	1.09	0.15	.40
	SUCOMP10	2.94	1.31	0.04	-1.09	.51
India	SUCOMP1	4.02	1.02	-1.08	0.72	.22
	SUCOMP2	3.77	1.02	-0.64	-0.01	.35
	SUCOMP3	3.32	1.09	-0.32	-0.36	.39
	SUCOMP4	2.63	1.20	0.25	-0.73	.50
	SUCOMP5	3.11	1.18	-0.28	-0.72	.43
	SUCOMP6	3.02	1.20	-0.11	-0.87	.50
	SUCOMP7	2.32	1.12	0.53	-0.45	.43
	SUCOMP8	2.61	1.26	0.42	-0.77	.42
	SUCOMP9	2.49	1.22	0.31	-0.86	.32
	SUCOMP10	3.42	1.23	-0.47	-0.73	.42

Country		*M*	*SD*	Skewness	Kurtosis	Corrected item-total correlation
Indonesia	SUCOMP1	3.87	0.90	-0.84	0.91	.42
	SUCOMP2	3.63	0.82	-0.03	-0.03	.29
	SUCOMP3	3.81	0.86	-0.46	0.12	.38
	SUCOMP4	2.60	0.98	0.24	-0.19	.57
	SUCOMP5	2.60	1.08	0.28	-0.55	.55
	SUCOMP6	3.16	1.07	-0.21	-0.38	.57
	SUCOMP7	2.60	0.97	0.14	-0.39	.58
	SUCOMP8	2.96	1.09	-0.08	-0.72	.48
	SUCOMP9	2.56	1.16	0.43	-0.57	.49
	SUCOMP10	3.58	1.07	-0.53	-0.25	.47
North Macedonia	SUCOMP1	3.99	1.02	-0.79	-0.07	.53
	SUCOMP2	4.01	1.00	-0.86	0.25	.50
	SUCOMP3	4.15	1.01	-1.16	0.84	.54
	SUCOMP4	2.82	1.16	-0.06	-0.76	.73
	SUCOMP5	2.75	1.29	0.11	-1.04	.75
	SUCOMP6	3.35	1.23	-0.27	-0.85	.64
	SUCOMP7	2.49	1.21	0.31	-0.95	.69
	SUCOMP8	2.87	1.28	0.01	-0.97	.65
	SUCOMP9	2.76	1.38	0.13	-1.24	.60
	SUCOMP10	3.77	1.21	-0.73	-0.34	.55
Serbia	SUCOMP1	3.38	1.10	-0.61	-0.22	.49
	SUCOMP2	3.64	1.00	-0.34	-0.38	.46
	SUCOMP3	3.68	1.08	-0.49	-0.39	.45
	SUCOMP4	2.53	1.22	0.30	-0.89	.65
	SUCOMP5	2.46	1.25	0.41	-0.88	.72
	SUCOMP6	2.99	1.28	-0.10	-1.01	.57
	SUCOMP7	2.23	1.09	0.47	-0.69	.60
	SUCOMP8	2.53	1.24	0.28	-0.99	.52
	SUCOMP9	2.10	1.34	0.93	-0.41	.52
	SUCOMP10	2.81	1.30	0.07	-1.09	.43
Syria	SUCOMP1	3.79	1.04	-0.74	0.00	.49
	SUCOMP2	3.79	1.03	-0.64	-0.04	.54
	SUCOMP3	3.83	1.05	-0.81	0.27	.53
	SUCOMP4	2.96	1.12	0.10	-0.67	.53
	SUCOMP5	3.02	1.20	-0.03	-0.86	.51
	SUCOMP6	3.63	1.13	-0.58	-0.40	.55
	SUCOMP7	2.83	1.01	0.02	-0.45	.54
	SUCOMP8	3.02	1.13	-0.06	-0.81	.63
	SUCOMP9	2.52	1.28	0.40	-0.91	.44
	SUCOMP10	3.44	1.27	-0.42	-0.87	.23

Country		*M*	*SD*	Skewness	Kurtosis	Corrected item-total correlation
Ukraine	SUCOMP1	3.25	1.02	-0.45	-0.55	.33
	SUCOMP2	3.25	0.94	-0.02	-0.26	.30
	SUCOMP3	3.35	1.02	-0.28	-0.67	.32
	SUCOMP4	2.36	0.95	0.47	-0.16	.46
	SUCOMP5	2.36	0.99	0.46	-0.39	.53
	SUCOMP6	2.96	1.01	-0.14	-0.77	.44
	SUCOMP7	2.48	0.97	0.43	-0.37	.51
	SUCOMP8	3.07	1.02	-0.32	-0.83	.34
	SUCOMP9	2.69	1.16	0.28	-0.76	.23
	SUCOMP10	3.37	1.05	-0.33	-0.59	.34