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## VALIDATION OF ADLERIAN INFERIORITY (COMPIN) AND SUPERIORITY (SUCOMP) COMPLEX SHORTENED SCALES

**ABSTRACT:** The main purpose of this study is to examine the inferiority and superiority complex scales, and develop their shortened versions. For this purpose two studies were conducted. In the first study, 395 students (62% female) were tested, and the inferiority (COMPIN, 40 items) and superiority complex (SUCOMP, 38 items) scales were analyzed. The examination of their psychometric properties indicated satisfactory psychometric features. Based on the values of communality, item-total correlation and scale principal component saturation, ten items were chosen for shortened scales. The exploratory factor analysis of the shortened scales clearly identified two factors that represent inferiority and superiority complex. In the second study, the sample consisted of 187 students (53% female). A confirmative factor analysis was carried out. The structural model consists of two correlated, identifiable dimensions and adequate fit indicators. Overall results suggest that the Adlerian concepts are adequately operationalized in COMPIN and SUCOMP scales. These scales can be valuable research tools in psychological research. Furthermore, shortened COMPIN-10 and SUCOMP-10 scales seem to be useful tools for measuring the inferiority and superiority complex.

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**KEY WORDS:** Inferiority and superiority complex, COMPIN and SUCOMP scales, validation.

### Introduction

Despite the importance of individual psychology, the Adlerian concepts are rather infrequently used in empirical research. Although they can be adequately psychometrically operationalized (Ignjatović, Momirović & Hošek 1995; Mitrović, 2004), as well as the constructs from other psychodynamic theories (Grygier, 1956; Ignjatović et al., 2001; Čekrlija, 2011; Momirović et al., 1975, 1976), they remain at the margins of scientific interest. Current research trends in personality psychology is focused on personality models such as: Big Three (Eysenck & Eysenck, 1975), Big Five (Goldberg, 1990; Costa & McCrea, 1992; Zuckerman, 2002) Big Six (Lee & Ashton, 2004) or Big Seven personality dimensions (Almagor, Tellegen & Waller, 1995; Goldberg & Somer, 2000; Smederevac, Mitrović & Čolović, 2010; Saucier, 1997). Predominant research problems are the structure of personality traits, description of their substructures, and relationship with other psychological constructs. At the same time, we can say that most of these models treat personality traits like psychological postulates. Current research has been focused on the structure of personality traits, while the origins and phylogenetic age of basic traits, their developmental processes, and dynamic interpretations of their relationship with other psychological and sociological factors seem to be of less interest to researchers. Besides, personality models are for the most part used and examined by academically oriented researchers, while psychotherapy and counselling mostly focus on constructs developed in psychodynamic theories (like individual psychology). Interestingly, however, personality factorial models and psychodynamic theories are not incompatible. Interpretations and explanations derived from their platforms are frequently consistent with each other (Mitrović, Jevremov & Vasić, 1997; Mitrović, Trogrlić & Todosijević, 1997). Considering that both of these fields have a solid position in psychology, it seems wrong to keep them separated.

The central concept of the Adlerian theory of personality is the feeling of inferiority (Adler, 1989). It is based on a real feeling of incom-

petence and absolute dependence we experience as infants and children. This feeling is triggered by the child's perception that others possess all the power, and that struggling against that kind of power is hopeless. As a result, the child feels inferior and less capable. In real life situations, inferiority feeling triggers the compensatory processes, with the aim to overcome the feelings of inadequacy. According to Adler, life style is the crucial factor that can lead to the feeling of inferiority. In the case of inferiority, the feeling of inadequacy activates compensation, while the superiority feeling triggers over-compensation. Inferiority and superiority complexes can exist simultaneously, and while one of them is manifest, the other one remains hidden. The main function of the inferiority feeling is to activate compensatory processes that make a person want to improve, grow and overcome their perceived weakness. On the other hand, the purpose of both the inferiority and superiority complex is to protect the self from the feelings of inferiority. Thus the inferiority complex can lead to a personality style made of justifications and alibis. With the superiority complex, the feeling of inadequacy is hidden and replaced by an impression of personal superiority.

The empirical data gathered so far suggest that the infantile inferiority feeling, inferiority and superiority complexes can be adequately operationalized for empirical examination. The analysis of superiority complex (SUCOMP) scale confirmed the existence of this construct and its valid psychometric features (Mihić & Mitrović, 1996; Mihić, Višekruna & Mitrović, 1996). The results also suggest that SUCOMP can be adjusted for school age respondents (Vasić, Veljković & Trogrlić, 2005). Šakotić and Karanjac (1999) confirmed the validation of the scale COMPIN and identified its valid psychometric properties. A taxonomic analysis of the infantile inferiority feeling, inferiority and superiority complex scales (Ignjatović, Momirović & Hošek, 1995) indicated that more than 97% of respondents were classified correctly. Mitrović (1998) reexamined all the scales related to feelings of inferiority. According to her findings, COMPIN and SUCOMP are consistent to basic concepts of Adlerian individual psychology and display valid properties.

The first validation study examined the relationship between the Adlerian complexes and Freudian libido fixations. Both authors insisted on the dynamic interpretation of personality system, and both of them

are neglected in the research based on multivariate methodology. The results obtained indicated the existence of a relationship between the inferiority complex and the Oedipus/Electra problems, oral-passive, and anal-retentive fixation (Višekruna, 1996; Višekruna, Trogrlić & Vasić, 1996), while the superiority complex was related to the Oedipus complex, oral-aggressive and anal-aggressive fixation (Ignjatović & Višekruna, 1966; Štrbac, Kosanović & Vasić, 1996). On the other hand, the analysis of relations with basic personality traits derived from Eysencks' PEN model, indicated a relationship between some domains from P and N scales with the inferiority feeling (Ignjatović, Delić & Trogrlić, 1996; Jevremov, 1997; Šakotić & Ruk, 1997). Kosanović and Šakotić (1996), and Šakotić, Kurbalija and Barišić (1997) added the results which emphasized the relationship between the inferiority feeling and introverted behavior. According to Ruk and Momčilov (1996), the superiority complex was related to normative morality as a substructure from the P scale. In further validation studies, the findings have emphasized a consistent relationship between the inferiority complex and the freezing anxiety (Radočaj & Vasić, 1998; Vasić & Radočaj, 1998), the excitatory anxiety (Momčilov & Krpović, 1995), as well as a relationship between the superiority complex and excitatory anxiety (Todosijević & Knebl, 1998). The study of the relationship between the superiority feeling and authoritarian personality symptoms, reported by Mitrović and Barišić (1997), led to the conclusion that the superiority complex could not be reduced to authoritarianism. The COMPIN and SUCOMP scales have also proved their predicted value of anxiety (Jevremov & Todosijević, 1998) and partners' relationship (Šakotić & Kurbalija, 2011).

The collected findings indicate that the COMPIN and SUCOMP scales are adequate measuring tools for the inferiority and superiority complex, with satisfactory psychometric characteristics, and consistent to Adlerian theoretical concepts. They seem to be useful tools in the empirical analysis of personality. We propose that these scales could provide a new qualitative aspect to the considerations of basic traits in the frame of personality models.

The main aim of studies conducted is to examine whether the COMPIN and SUCOMP scales can be reduced to shorter, 10-items versions. As the scales comply with the Adlerian theory and exhibit valid

metric characteristics, we came to the idea to form shorter questionnaire versions. The scales would probably remain unidimensional, so as not to lose too many of their psychometric characteristics, but they would become much more practical to use. Gosling et al. (Gosling, Rentfrow & Swann, 2003) emphasize that short measures of personality traits are equally valid as the estimations based on longer questionnaires. For example, Rosenberg's 10-item scale (Rosenberg, 1965) is probably the most used self-esteem measure. John and Svrstava (1999) created the BFI-10 scale which includes measures of all Big Five personality factors. The most radical example is the single item self-concept scale (Robins, Hendin, & Trzesniewski, 2001). Using the original versions is certainly preferable, but it is expected that shorter inferiority and superiority scales will provide adequate insight into certain personality processes.

## **Study 1**

The main aim of this study is to examine psychometric properties of the COMPIN (Mitrović, 1998) and SUCOMP (Mitrović, 1998) scales in order to identify which items to include in the shortened versions. Previous studies have shown that both scales are unidimensional. Therefore, we expected to single out items with the best psychometric properties for shortened versions of both instruments.

## **Method**

### **Sample and Procedure**

The sample consisted of 395 students (62% female) from Banja Luka University, between 20 and 32 years old ( $M=22.93$ ,  $SD=1.13$ ). The students completed questionnaires after their regular classes. Participation in the research was completely voluntary and anonymous.

### **Instruments**

Two questionnaires were administered. The COMPIN scale (Mitrović, 1998) consisting of 38 items was used in the inferiority complex estimation, while the superiority complex was assessed with the 40-item scale SUCOMP (Mitrović, 1998). Both scales indicate satisfactory Cronbach  $\alpha$  coefficients of reliability (COMPIN,  $\alpha=.92$ , and SUCOMP,  $\alpha=.93$ ).

### **Data Analysis**

In the first step the COMPIN and SUCOMP scales were examined separately. The purpose was to examine whether scales could be adequately operationalised through a single dimension, and second, whether it was possible to single out adequate items for shortened versions. A descriptive statistical analysis was conducted first. The internal consistency of scales was examined using a reliability analysis. Next, a principal component analysis for both scales was carried out. As the previous analysis suggests, both scales proved suitable for reduction. The values of communality coefficients, principle components loadings and item-total correlation coefficients were proposed as the criteria for the reduction process that would result in a 10-item version of both scales.

An exploratory factor analysis was performed to check the factorial structure of the COMPIN and SUCOMP shortened 10-item version scales. The principal component method was used in factor extraction and scree test in the identification of significant factors. The extracted factors were rotated in the promax position. The exploratory factor analysis was expected to indicate whether it was possible to replicate the two separate dimensions clearly representing the inferiority and superiority complex operationalized by the COMPIN and SUCOMP short version scales.

### **Results**

The following data examination involved an analysis of parameters meant to be used in scales reduction. Therefore, descriptive statistics were analysed. Average item scores were ranged between 1.62 and 2.58 for the inferiority complex and between 1.89 and 4.11 for superiority complex scale (table 1). Three items in the COMPIN scale (items 11, 16 and 21) showed significant skew indexes. The SUCOMP scale items indicated lower skew index values.

The first principal component was better defined and higher saturated for the COMPIN scale and could explain the 45% of variance. The SUCOMP scale first component could explain 32% of total variance. The factor loadings were in a range between .42 and .81 for the COMPIN, and from .32 to .76 for the SUCOPM scale. Generally, item-total correlation was satisfactory for both scales. Higher values were registered for

*Table 1. Items descriptive statistics and first principal component  
 (comunalities and factor saturations)*

	<i>M</i>	<i>SD</i>	<i>S</i>	<i>K</i>	<i>c</i>	<i>r</i>	<i>IPC</i>		<i>M</i>	<i>SD</i>	<i>S</i>	<i>K</i>	<i>c</i>	<i>r</i>	<i>IPC</i>
COMPIN1	2.19	.90	.88	.92	.62	.42	.64	SUCOMP1	4.11	.69	-.15	-.84	.29	.10	.32
COMPIN2	2.02	.90	1.10	1.59	.66	.47	.69	SUCOMP2	3.13	.93	-.27	-.49	.50	.28	.53
COMPIN3	2.42	1.18	.43	-.73	.63	.43	.66	SUCOMP3	3.56	.92	-.17	-.06	.53	.33	.58
COMPIN4	2.00	1.03	.64	-.54	.64	.45	.67	SUCOMP4	3.50	.80	-.23	.91	.56	.35	.59
COMPIN5	2.05	1.00	.66	-.33	.65	.46	.68	SUCOMP5	2.93	.82	-.29	.57	.43	.21	.46
COMPIN6	2.42	1.25	.67	-.62	.64	.43	.66	SUCOMP6	3.31	.95	-.54	.43	.37	.17	.41
COMPIN7	2.26	1.07	.66	-.40	.66	.46	.68	<b>SUCOMP7</b>	<b>3.38</b>	<b>1.00</b>	<b>-.24</b>	<b>-.71</b>	<b>.58</b>	<b>.39</b>	<b>.62</b>
COMPIN8	1.98	.97	.93	.60	.67	.48	.69	SUCOMP8	2.81	.87	.02	-.15	.52	.31	.56
<b>COMPIN9</b>	<b>2.51</b>	<b>1.11</b>	<b>.34</b>	<b>-.85</b>	<b>.70</b>	<b>.51</b>	<b>.72</b>	<b>SUCOMP9</b>	<b>3.69</b>	<b>.86</b>	<b>-.60</b>	<b>.74</b>	<b>.61</b>	<b>.43</b>	<b>.66</b>
COMPIN10	1.97	.91	.64	-.41	.67	.49	.70	SUCOMP10	2.87	1.03	.16	-.99	.53	.33	.57
COMPIN11	1.78	.88	1.48	2.82	.68	.50	.71	SUCOMP11	2.52	.91	.50	.74	.48	.27	.52
COMPIN12	2.23	1.11	.67	-.39	.68	.48	.69	SUCOMP12	3.48	.86	-.22	-.60	.58	.38	.62
COMPIN13	1.82	.85	1.08	1.33	.47	.24	.49	<b>SUCOMP13</b>	<b>3.41</b>	<b>.86</b>	<b>-.35</b>	<b>.18</b>	<b>.62</b>	<b>.44</b>	<b>.66</b>
<b>COMPIN14</b>	<b>2.22</b>	<b>1.21</b>	<b>.71</b>	<b>-.62</b>	<b>.79</b>	<b>.64</b>	<b>.80</b>	SUCOMP14	2.59	.94	.50	.85	.57	.38	.62
COMPIN15	1.86	.91	1.22	1.77	.64	.45	.67	SUCOMP15	2.72	.92	-.01	-.24	.59	.37	.61
<b>COMPIN16</b>	<b>1.86</b>	<b>.82</b>	<b>1.17</b>	<b>2.01</b>	<b>.68</b>	<b>.49</b>	<b>.70</b>	SUCOMP16	3.83	.91	-.45	-.47	.31	.11	.33
COMPIN17	2.58	1.15	.31	-.79	.51	.27	.52	<b>SUCOMP17</b>	<b>2.26</b>	<b>.81</b>	<b>-.06</b>	<b>-.68</b>	<b>.62</b>	<b>.42</b>	<b>.65</b>
<b>COMPIN18</b>	<b>1.99</b>	<b>1.10</b>	<b>1.06</b>	<b>.34</b>	<b>.73</b>	<b>.57</b>	<b>.75</b>	<b>SUCOMP18</b>	<b>2.26</b>	<b>.91</b>	<b>.53</b>	<b>.34</b>	<b>.72</b>	<b>.58</b>	<b>.76</b>
COMPIN19	1.98	.90	.92	.76	.60	.39	.63	<b>SUCOMP19</b>	<b>2.67</b>	<b>.97</b>	<b>.21</b>	<b>-.63</b>	<b>.65</b>	<b>.47</b>	<b>.68</b>
COMPIN20	2.13	.97	.84	.43	.60	.40	.63	SUCOMP20	1.91	1.01	1.32	1.74	.43	.23	.48
<b>COMPIN21</b>	<b>1.59</b>	<b>.87</b>	<b>1.57</b>	<b>2.29</b>	<b>.68</b>	<b>.51</b>	<b>.71</b>	<b>SUCOMP21</b>	<b>1.89</b>	<b>.79</b>	<b>.44</b>	<b>-.59</b>	<b>.64</b>	<b>.44</b>	<b>.66</b>
<b>COMPIN22</b>	<b>2.14</b>	<b>1.09</b>	<b>.92</b>	<b>.24</b>	<b>.79</b>	<b>.65</b>	<b>.81</b>	SUCOMP22	2.37	.88	.24	-.53	.57	.37	.61
COMPIN23	1.82	.88	.93	.21	.65	.46	.68	<b>SUCOMP23</b>	<b>2.28</b>	<b>.98</b>	<b>.66</b>	<b>.04</b>	<b>.65</b>	<b>.47</b>	<b>.69</b>
COMPIN24	2.47	1.15	.66	-.31	.66	.46	.68	SUCOMP24	3.04	1.18	-.22	-1.05	.49	.30	.55
COMPIN25	1.93	.84	.67	-.07	.54	.33	.57	SUCOMP25	3.19	1.08	-.20	-.40	.59	.38	.62
COMPIN26	2.12	1.01	.55	-.49	.59	.37	.61	SUCOMP26	2.07	.95	1.09	1.11	.47	.26	.51
COMPIN27	2.09	.99	.74	.18	.63	.43	.66	<b>SUCOMP27</b>	<b>2.44</b>	<b>1.02</b>	<b>.21</b>	<b>-.58</b>	<b>.63</b>	<b>.44</b>	<b>.66</b>
COMPIN28	2.11	.98	.45	-.52	.60	.39	.63	SUCOMP28	3.26	1.07	-.26	-.51	.49	.28	.52
<b>COMPIN29</b>	<b>1.87</b>	<b>.95</b>	<b>1.23</b>	<b>1.47</b>	<b>.73</b>	<b>.57</b>	<b>.75</b>	SUCOMP29	3.26	1.10	-.28	-.41	.44	.20	.45
COMPIN30	1.62	.77	.77	-.88	.56	.34	.59	SUCOMP30	2.93	1.03	-.07	.13	.58	.36	.60
COMPIN31	2.39	1.25	.59	-.81	.62	.41	.64	SUCOMP31	2.54	1.21	.44	-.67	.32	.11	.33
COMPIN32	2.04	.99	.95	.51	.63	.42	.65	SUCOMP32	2.74	1.01	.10	-.90	.47	.23	.47
<b>COMPIN33</b>	<b>2.12</b>	<b>1.01</b>	<b>.80</b>	<b>.15</b>	<b>.71</b>	<b>.54</b>	<b>.73</b>	SUCOMP33	3.85	.96	-.76	.39	.42	.19	.44
COMPIN34	2.36	1.12	.41	-.89	.68	.48	.70	SUCOMP34	2.65	1.01	.32	.11	.46	.25	.50
<b>COMPIN35</b>	<b>2.03</b>	<b>1.10</b>	<b>.84</b>	<b>-.26</b>	<b>.70</b>	<b>.51</b>	<b>.72</b>	SUCOMP35	2.96	1.06	-.12	-1.02	.44	.21	.46
<b>COMPIN36</b>	<b>2.19</b>	<b>1.19</b>	<b>.74</b>	<b>-.50</b>	<b>.77</b>	<b>.61</b>	<b>.78</b>	SUCOMP36	2.52	.99	.13	-.45	.53	.32	.57
COMPIN37	1.89	.95	.96	.41	.52	.28	.53	<b>SUCOMP37</b>	<b>3.41</b>	<b>1.11</b>	<b>-.45</b>	<b>-.50</b>	<b>.63</b>	<b>.44</b>	<b>.66</b>
COMPIN38	1.82	.90	.89	-.04	.66	.46	.67	SUCOMP38	2.20	1.03	.74	.34	.48	.25	.50
COMPIN39	1.92	1.10	1.16	.72	.53	.30	.55								
COMPIN40	1.94	1.05	.99	.22	.67	.49	.70								

NOTE: *c* = comuality; *r* = corrected item-total correlation; Items selected for shortened versions are given in bold.

the COMPIN items (from .51 to .79). The values for the SUCOMP items were also satisfactory but in a greater range (.29 to .72).

In accordance with the aim of the study, three basic criteria were chosen: communalities, factor loadings and item-total correlation. In the COMPIN scale, the ten items selected for shortened version showed the highest values on all three criteria. In the SUCOMP scale, the nine selected items had the highest values on all criteria, while item 7 was selected on the base of comunalities and factor loading values. The overall examination proved that both scales had a robust first principal component suitable for shorter version construction.

Two dimensions, suggested by the scree test, were extracted in the exploratory factor analysis of the shortened COMPIN and SUCOMP scales. They explained 53 % of variance (first factor, 31%). Table 2 provides clear evidence that factors were highly saturated with items from different scales. The first factor was defined by high correlations with all COMPIN items and one negative relation with item SUCOMP17. We considered this to be an adequate operationalization of the inferiority complex. The saturations on the second factor were also very high. Since all items from SUCOMP scale define it, the second factor was taken to represent the superiority complex factor. The correlation between the factors defined as *inferiority* and *superiority complex* was -.16. Generally speaking, the exploratory factor analysis clearly suggests that the shortened COMPIN and SUCOMP scales measure separate dimensions that could be described as the inferiority and the superiority complex, and adequately represent the original scale.

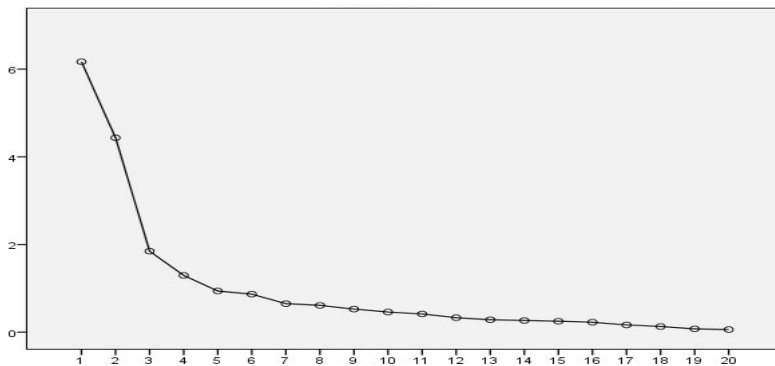


Figure 1. Scree plot



Table 2. *Exploratory factor analysis of COMPIN-10 & SUCOMP-10 scales*

	I	II
COMPIN9	.71	
COMPIN14	.86	
COMPIN17	.63	
COMPIN18	.71	
COMPIN21	.68	
COMPIN22	.77	
COMPIN29	.66	
COMPIN35	.72	
COMPIN36	.84	
COMPIN33	.74	
SUCOMP7		.69
SUCOMP9		.66
SUCOMP13		.73
SUCOMP17	-.41	.61
SUCOMP18		.85
SUCOMP19		.70
SUCOMP21		.78
SUCOMP23		.68
SUCOMP27		.70
SUCOMP29		.55

NOTE: Original item numbers were retained.

### Discussion

The main research goal was to identify the COMPIN and SUCOMP items with best psychometric properties for the shortened questionnaires version. Both examined scales indicate acceptable psychometric properties. At first, the reliability coefficients are very high and similar to previous studies (Barišić & Kosanović, 1996; Mihić & Mitrović, 1996; Momčilov, Radočaj, 1999), as well as the first principal component structure of both scales (Mitrović, 1998). In the process of scales reduction, the following three criteria were used: communalities, first component loadings and item-total correlation, which were in accordance. Generally, the first principal component is well defined on both

scales. Comunalities and factor loadings are higher on the COMPIN items. Besides, the factor loadings on the SUCOMP scale are in a wider range, and it was easier to identify which items should be kept. Item-to-total correlations are also higher on the COMPIN scale. At the same time, the lack of confidence and low self-esteem comprise the structure of the first principal component on the COMPIN scale. Cognitive superiority and impression of personal importance, as well as dominance over other people, are the indicators that show the highest factor loadings on the SUCOMP scale. The minimal value of coefficient for selected items is .70. The same parameter values are generally lower on the SUCOMP items, but still in a satisfactory range.

The factor analysis conducted on the shortened scale versions identified two factors that absolutely match the scales' principal components. A single item (SUCOMP17, *Only rarely have people had as much success as I did*) defines both factors. Once again, the low self-esteem indicators have the most significant loads on this latent dimension. On the other hand, the items related to feeling of personal omnipotence show the highest loadings on the SUCOMP latent dimension. From the theoretical perspective, the extracted factors on both scales can be accepted as a measure of the inferiority and superiority complex. Scales reduction did not decrease construct or divergent validity. The inferiority and superiority complex indicators are still well represented and clearly separated from each other.

The first study results indicate that the COMPIN and SUCOMP shortened version scales could be used in the inferiority and superiority complex assessment. In order to obtain relevant confirmation, a convergent and divergent validity examination should be carried out.

## **Study 2**

In the second study, we analyzed the basic psychometric properties and dimensionality of the COMPIN-10 and SUCOMP-10 scales. We tested if the shortened inferiority and superiority scales replicated psychometric properties from the original versions. Therefore, this part of research could be a valuable contribution to the further examination of Adlerian concepts, and could prove useful in the validation process of both questionnaires.

## Method

### Sample and Procedure

The second study sample consisted of 187 students (53% female). The data was collected online using the snowballing technique. The online questionnaire link was sent to psychology students at the University of Banja Luka, who in turn forwarded it to their web contacts. All the data was collected within seven days. The respondents were between and 19 and 41 years old ( $M=25.12$ ,  $SD=4.49$ ). Participation was voluntary and anonymous.

### Instruments

Shorter versions of the inferiority and superiority complex scales were used in this study. The 10-item version of the COMPIN was used as a measure of the inferiority complex and the 10-items version of the SUCOMP was used in measuring the superiority complex. The shorter inferiority and superiority complex scales maintain a high reliability, as Cronbach  $\alpha$  coefficients indicate (COMPIN-10,  $\alpha=.90$  i SUCOMP-10,  $\alpha=.88$ ).

### Data Analysis

The shortened versions of the inferiority (COMPIN-10) and superiority complex scales (SUCOMP-10) were examined through the exploratory and confirmatory factor analyses. The purpose was to examine whether the short scales exhibit tendencies consistent with the original versions findings.

## Results

The common factorial structure of the COMPIN-10 and SUCOMP-10 was first examined using the exploratory factor analysis using principal components method. The scree test suggested a clear two-factorial solution, which was consistent with previous study findings. Kaiser–Meyer–Olkin measure (.72) implies that the scales were adequately represented, while the Bartlett's sphericity test ( $\chi^2(435) = 1963.33$ ,  $p<.00$ ) indicates that data reduction was justified. The two factors explained 65.44% of variance.

In order to retest the common factorial structure of the COMPIN-10 and SUCOMP-10 scales hypothesis, the confirmatory factor analysis was conducted. We tested only one model with two correlated latent variables which were supposed to represent the inferiority and superiority complex (table 4). Each item was linked to a single factor. The estimation method was Maximum Likelihood, calculated on covariance matrix.  $\chi^2/df$  ratio is in agreement with the proposed good fit indicator  $\leq 3.00$  (Kline, 2005). The RMSEA and SRMR values indicate a good fit between empirical results and theoretically proposed structure (acceptable values  $<.10$ ). The index of fit (GFI) and comparative fit index (CFI) are above the suggested limit of explained variance.

Table 3. Confirmatory factor analysis fit parameters

$\chi^2$	df	p	$\chi^2/df$	GFI	CFI	RMSEA (90% CI)	SRMR
312.913	169	.00	1.86	.91	.92	.09 (.08-.10)	.08

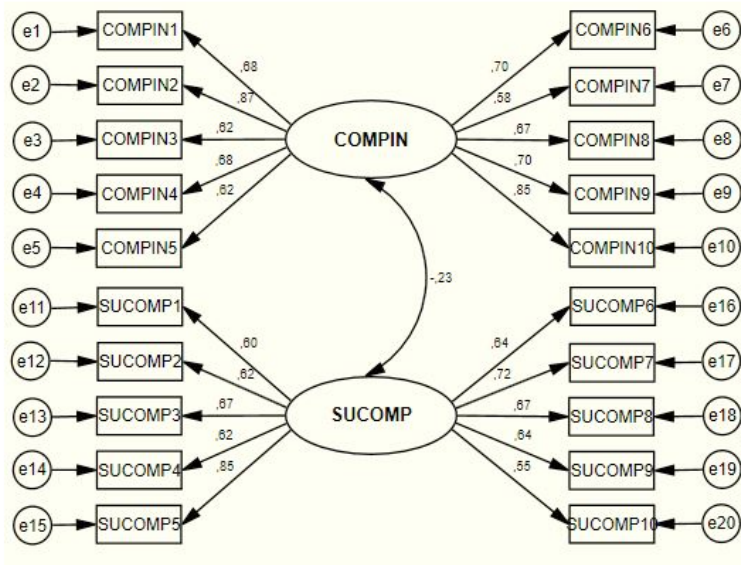


Figure 2. Factor loadings on inferiority and superiority complex scale factors

As figure 2 shows, the COMPIN and SUCOPM items were strictly divided into two latent variables. Both latent variables were highly saturated by all items from corresponding scale. As expected, negative weak correlations (-.23) were registered between latent variables. Confirmed latent variables structure (figure 2) were completely in accordance with the previous findings of the COMPIN and SUCOMP scales, as well as compatible with the Adlerian theoretical concept of inferiority and superiority complex.

### Discussion

Previous research has rarely dealt with questionnaire operationalization of Adlerian concepts. The main goal of the present study was to examine the shortened versions of inferiority and superiority complex scales (named COMPIN-10 and SUCOMP-10). In general, the results presented here were congruent with the results from the previous study with the COMPIN and SUCOMP (Mitrović, 1998).

The structure of the first latent dimension defined by all COMPIN-10 items absolutely corresponds with the inferiority complex. Factor accounts for low self-esteem, inferiority feeling and defense mechanisms. Items 2 (*I am aware how much I know about myself, but I cannot deal with it*) and 10 (*I have no self-confidence*) show the highest loads on the latent dimension. Indicators of regression and rationalization also show high values and indicate a general misanthropy as a life style and a attitude towards any challenge.

The second latent variable corresponds to the superiority complex. Indicators of personal omnipotention are highly loaded on factor? The content of items 5 (*Few people can compare with me*) and 7 (*Normally no solution can be found without me*) clearly presents the importance of the feeling of omnipotence in determining the existance of the superiority complex. Competitiveness and self-confidence are high loads factors as well. The content of the second latent variable defined by the SUCOMP-10 items match the principal superiority complex factor reported in the previous studyt with the SUCOMP (Ignjatović, Delić, & Momirović, 1995; Mitrović, 1998, Trogrlić & Krpović, 1999).

The correlations between latent dimensions are similar to the previous studies of the relationship between the inferiority and superiority complex (Barišić, 1996; Ignjatović, Momirović, & Hošek, 1995; Mitrović, 1998). It confirms the Adlerian assumptions on the nature of their relationship. The correlation of  $-.23$  between the superiority and inferiority complex emphasizes their simultaneous existence. The negative correlation should be an indicator of overcompensation, which helps a person overcome the original feeling of inferiority. This also helps indicate the distinction between inferiority and superiority attitude.

### **General Discussion**

The main goal of the studies presented in this paper was the construction of the shortened inferiority (COMPIN-10) and superiority (SUCOMP-10) complex scales. Although the original versions have yielded well-grounded results and a solid insight in the Adlerian complex so far, we deemed it desirable to have shorter scales for quick assessment. The valid characteristics of original versions provide the easy selection of items for shortened scales. Analogously, shortened scale versions indicate valid psychometric properties, consistent to the original scales. Furthermore, contents of extracted dimensions are in accordance with the Adlerian conceptualization of the inferiority and superiority complex. Finally, as a brief operationalization of Adlerian basic concepts, the shortened scales can be easily included in personality model assessment. In light of overall findings, the shortened scales could be accepted as brief measure of the inferiority and superiority complex. The overall results may be seen as a contribution to further investigations of Adlerian individual psychology.

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## Appendix 1.

Table 5. *Inferiority complex scale, COMPIN (Nonvalidated translation)*

1. I often think that I will fail because of previous failures.	1	2	3	4	5
2. I look less capable compared to others.	1	2	3	4	5
3. Fear of failure sometimes stops me at the very begginging.	1	2	3	4	5
4. I am less confident than most of people I know, because of my previous life.	1	2	3	4	5
5. I fail because I can not manage things	1	2	3	4	5
6. I would often ask for help but I don't because I do not want to bother others.	1	2	3	4	5
7. When people criticise me, I think: I have done wrong again.	1	2	3	4	5

Đorđe Čekrlija, Dijana Đurić, Biljana Mirković  
 VALIDATION OF ADLERIAN INFERIORITY (COMPIN) AND SUPERIORITY  
 (SUCOMP) COMPLEX SHORTENED SCALES

8. I think that others have more competences than I do.	1	2	3	4	5
9. I do not know how to use my competences at the right moment.	1	2	3	4	5
10. I give up easily, even when others think I am doing fine.	1	2	3	4	5
11. I often give up even if others support me.	1	2	3	4	5
12. I do not know my own value.	1	2	3	4	5
13. I am not difficult to beat in a discussion, because my arguments are mostly weak.	1	2	3	4	5
14. I know that I underestimate myself, but I can not deal with it.	1	2	3	4	5
15. I am not good in things that other people manage easily.	1	2	3	4	5
16. When I work with others it seems that I am not good as them.	1	2	3	4	5
17. Usually my performance is under average because I do not like to be intrusive.	1	2	3	4	5
18. I can not express myself and keep the people I love by my side.	1	2	3	4	5
19. When I have to show my competences I most often fail.	1	2	3	4	5
20. I do not do well, because I do not know how to make an effort.	1	2	3	4	5
21. During work I keep telling myself: I won't make it, so it would be better if I didn't start at all.	1	2	3	4	5
22. I often feel that I will not be able to do what is expected.	1	2	3	4	5
23. I like to do one task at a time, because I make mistakes if I have to deal with two things simultaneously.	1	2	3	4	5
24. I would change a lot of my characteristics.	1	2	3	4	5
25. I do not see things as I would like to, because I have no luck.	1	2	3	4	5
26. Sometimes I feel very small and helpless.	1	2	3	4	5
27. I do not like to make life experiments, because I rarely manage to do anything at all.	1	2	3	4	5
28. I will never get even close to my idols.	1	2	3	4	5

29. I am easily inhibited by failure and I find it difficult to go on.	1	2	3	4	5
30. I often leave a bad impression, although I would like to change that.	1	2	3	4	5
31. It is harder to notice my virtues than my weaknesses.	1	2	3	4	5
32. There are many things that are beyond my reach.	1	2	3	4	5
33. I often feel that I am not ready for things that I have to do.	1	2	3	4	5
34. I underestimate my abilities.	1	2	3	4	5
35. I do not respect myself enough.	1	2	3	4	5
36. I am not self-confident.	1	2	3	4	5
37. I never talk to people first because I do not know how to do it.	1	2	3	4	5
38. When somebody compliments me, I know it is just good manners.	1	2	3	4	5
39. I can not say no even when it is necessary.	1	2	3	4	5
40. I tend to attribute my failures to various circumstances.	1	2	3	4	5

## Appendix 2.

Table 6. *Superiority complex scale, SUCOMP (Nonvalidated translation)*

1. It is in my nature to be successful.	1	2	3	4	5
2. I am always leading conversation even when I am tired of it..	1	2	3	4	5
3. I can win against anybody if I put my mind to it.	1	2	3	4	5
4. People can always learn something clever from me.	1	2	3	4	5
5. I am sure people talk about me because I have a strong personality.	1	2	3	4	5
6. Life would be much better if people would think and work like I do.	1	2	3	4	5
7. When I do something, it is important to me to be the best, and I mostly manage to be.	1	2	3	4	5
8. Even when others think differently, my conclusions are better.	1	2	3	4	5

9. My way of thinking is very original.	1	2	3	4	5
10. People often say I am wrong, but no one can prove it.	1	2	3	4	5
11. People can not find any flaw in my character, unless they are malicious.	1	2	3	4	5
12. I think most people could learn a lot from me.	1	2	3	4	5
13. I can withstand and work more than most people.	1	2	3	4	5
14. Those who are friends with me gain prominence as well.	1	2	3	4	5
15. I know that other people secretly admire me, even if they deny it.	1	2	3	4	5
16. I am always efficient when doing something.	1	2	3	4	5
17. Few people have had as much success as I have.	1	2	3	4	5
18. Few people can compare with me.	1	2	3	4	5
19. What is just an ordinary thing to me, many people would consider success.	1	2	3	4	5
20. No one works better than me.	1	2	3	4	5
21. Normally no solution can be found without me.	1	2	3	4	5
22. Those who have achieved as much as I have had to try harder.	1	2	3	4	5
23. Sometimes I don't fulfill my own expectations, but I know that others would not achieve even that much.	1	2	3	4	5
24. I wasn't successful only when I didn't care about it..	1	2	3	4	5
25. I am not afraid of arguments because I know that my opinion will be the correct one.	1	2	3	4	5
26. Real knowledge is gained by experience; I have enough experience and so do not need the opinion and advice of others.	1	2	3	4	5
27. The worst thing would be if there weren't people like me.	1	2	3	4	5
28. Charm is one of my powers.	1	2	3	4	5
29. When I want something, I make it clear to everybody.	1	2	3	4	5

30. When I explain something, no more explanation is required.	1	2	3	4	5
31. People rarely make fun of me because they know that I can retaliate.	1	2	3	4	5
32. I have never failed yet because I was always ready for anything.	1	2	3	4	5
33. I know what I want and that I can get it.	1	2	3	4	5
34. My assessment is always the most correct so far.	1	2	3	4	5
35. I am rarely disturbed by anything.	1	2	3	4	5
36. I rarely miss a chance to show my advantage.	1	2	3	4	5
37. I am interested in many things and that sets me apart from other people..	1	2	3	4	5
38. I know that people feel honoured by my presence, even if they do not want to admit it.	1	2	3	4	5

## VALIDACIJA SKRAĆENIH SKALA ADLEROVSKOG KOMPLEKSA INFERIORNOSTI (COMPIN) I SUPERIORNOSTI (SUCOMP)

**REZIME:** Glavni cilj ovog istraživanja jeste da se preispitaju skale za kompleks inferiornosti, odnosno superiornosti, i da se kreiraju njihove skraćene verzije. U to svrhu, sprovedene su dve studije. Prva studija je obuhvatila 395 studenata (62% ženskog pola), a analizirane su skale kompleksa inferiornosti (COMPIN, 40 stavki) i superiornosti (SUCOMP, 38 stavki). Ispitivanje psihometrijskih karakteristika pokazalo je da su psihometrijske osobine skala zadovoljavajuće. Na osnovu vrednosti komunaliteta, ajtem-total korelacije i zasićenosti glavnog komponenta skale, za skraćene verzije je izabrano po deset stavki. Eksploratorna faktorska analiza skraćenih skala jasno je ukazala na dva faktora koji predstavljaju kompleks inferiornosti, odnosno superiornosti. Uzorak druge studije obuhvatio je 187 studenata (53% ženskog pola), i na njemu je urađena je konfirmativna faktorska analiza. Strukturalni model se sastoji od dve prepoznatljive, korelirane dimenzije i od odgovarajućih fit indikatora. Na osnovu rezultata u celini, možemo zaključiti da se adlerovski pojmovi mogu adekvatno operacionalizovati pomoću skala COMPIN i SUCOMP. Ove skale mogu biti važni instrumenti u psiholoških istraživanjima. Takođe, skraćene skale COMPIN-10 i SUCOMP-10 korisni instrumenti za merenje kompleksa inferiornosti, odnosno superiornosti.

**KLJUČNE REČI:** kompleks inferiornosti i superiornosti, COMPIN i SUCOMP skale, validacija.