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SHAALA-22: Construction and Validation of the New Academic Self-Handicapping Scale

Abstract: *The aim of this study was to construct and validate a new instrument for assessing Academic Self-Handicapping. The instrument consists of 22 items. A total of 251 participants, consisting of high-schoolers and university students, participated in the study. The results confirm sound psychometric properties and the validity of the scale. Exploratory factor analysis identified one component that explains 28% of the total variance. Convergent and discriminant validity was tested through correlation analyses with the subscales of the instruments HEXACO-60, Self-Liking/ Self-Competence scale, and Self-Handicapping Questionnaire. Academic Self-Handicapping was strongly negatively correlated with Conscientiousness, dimensions of Self-Esteem, Extraversion and Honesty, positively related with Emotionality and four Self-Handicapping strategies. In the paper we discuss potential understanding of Academic Self-Handicapping as the manifestation of depression in academic context and that the root cause of these behaviors lies in the achievement-oriented school system. We conclude that our instrument can be used to assess the Academic Self-Handicapping of students and can serve as a useful tool for understanding the psychological systems of students.*

Keywords*: academic self-handicapping, self-handicapping, questionnaire construction, questionnaire validation*

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Introduction

The construct of self-handicapping was developed in the 1970s in a study by Berglas and Jones - it is defined as the creation of obstacles that prevent the successful performance of a task (Berglas & Jones, 1978). The goal of these strategies is to preserve self-esteem by externalizing the causes that lead to potential failure, as well as increasing the perception of one's own competence if success occurs despite obstacles (Jones & Berglas, 1978). Academic self-handicapping (ASH) refers to the use of self-handicapping strategies within an academic context (Urdan & Midgley, 2001). Some examples of this self-handicapping behavior can include procrastinating, effort withdrawal, and claiming test anxiety or illness (Urdan & Midgley, 2001). Through the proactive and anticipatory technique of self-handicapping, individuals can arrange a scenario before a task where both failure and success are strategically managed. In this set-up, failure can be primarily attributed to specific, controllable causes, minimizing its impact on self-esteem. Conversely, success can be credited to personal abilities overcoming obstacles and bolstering confidence (Török, Szabó, & Tóth, 2018). Thus, individuals do not attribute failure to their ignorance, but to some external or internal factor (Berglas & Jones, 1978). In essence, self-handicapping allows individuals to navigate both success and failure in a way that preserves self-image and confidence.

Often, students experience threats to their self-esteem in school and academic context (Pullman & Allik, 2008). These threats often arise from the apprehension of failure in impending achievement contexts, such as a crucial exam. The authors believe that a commonly used psychological strategy for regulating self-esteem threat is self-handicapping, or more specifically, Academic self-handicapping (Schwinger et al., 2014). If we accept Kelley's theory of attribution (1971), we can propose a protective function of self-handicapping for self-esteem, leveraging the principles of discounting and augmentation in attribution. In case of failure, the presence of a hindrance provides individuals with the opportunity to shift attributions from a low ability (e.g., "I failed the exam because I'm unintelligent") to the handicap itself (e.g., "I went out with my friends and got drunk. Of course, I failed the exam because I didn't get enough sleep last night and had a hang-over"). This shift discounts ability as a causal factor, thereby buffering one's perception of competence and self-esteem. Conversely, if the individual unexpectedly succeeds, attributions to high ability will be amplified due to the individual's performance despite the handicap (e.g. "Even though I was drunk last night, I managed to perform well and that is a proof of my high intelligence"; Tice, 1991).

Truly, the relationship between ASH and self-esteem is observed in various studies and the authors showed that correlation between these two psychological constructs is moderately negative. In one study (Midgley & Urdan, 1995), the authors found negative correlations between academic self-handicapping and two self-esteem dimensions: self-evaluation ($r = -.32$) and self-efficacy ($r = -.27$). Also, a significant correlation was obtained between negative self-confidence and self-handicapping ($r = .23$). The authors explained these findings by claiming that people who are prone to lower self-esteem will not believe in themselves and this will be reflected in their professional life, which will lead to the use of self-handicapping strategies. Also, they will use these strategies to maintain their integrity when they anticipate failure (Midgley, Arunkumar, & Urdan, 1996). Thus, self-esteem is proven to be an important correlate of ASH.

Regarding the association between academic self-handicapping (ASH) and other psychological constructs, we will explore the relationship between ASH and personality traits. One of the most researched psychological constructs is the Five-Factor model of personality (McCrae & John, 1992). This model consists of five broad personality traits (Neuroticism, Extraversion, Agreeableness, Consci-

entiousness, Openness to experience) which are believed to constitute the space of personality. The authors examined the relationship between this model and self-handicapping. In one study (Ross, Canada, & Rausch, 2002), significant correlations were found between the traits of Neuroticism and self-handicapping ($r = .63$) and Conscientiousness and self-handicapping ($r = -.65$). For the other three traits, no overall correlation was observed with self-handicapping, but specific facets showed associations: Assertiveness ($r = -.31$) and Activity ($r = -.23$) for Extraversion; Fantasy ($r = .29$) for Openness; and Trust ($r = -.16$) for Agreeableness. Individuals employ various self-handicapping mechanisms to navigate stressful situations and preserve a positive self-image. Our interpretation suggests that this tendency is particularly pronounced in individuals with higher Neuroticism scores, as they are more inclined to use these strategies to avoid potential failures that could trigger negative emotions. Conversely, individuals with high levels of Conscientiousness approach their responsibilities with greater diligence and seriousness, which may influence their use of self-handicapping mechanisms.

Apart from psychological variables, the authors mapped some important socio-demographic variables that can shed more light on the construct of ASH. In certain studies, differences between males and females were observed (Čolović, Smederevac, & Mitrović, 2009), while in others, no significant differences between the sexes were found (Strube, 1986). The resulting difference is attributed to the notion that men may feel the need to justify their failures to uphold a "strong" and "masculine" image in society. Additionally, some authors suggest that socioeconomic status plays a significant role in academic self-handicapping (Midgley et al., 1996). They argue that individuals from lower socioeconomic backgrounds or less developed environments may exhibit a greater propensity to employ self-handicapping strategies. One controversial finding is certainly the relationship between ASH and academic achievement. Two meta-analyses of ASH

concluded that the relationship between ASH and academic achievement is a complex one (Schwinger et al., 2014; Török et al., 2018). It should be noted that many moderator variables should be identified so that we could shed light upon this relationship. However, authors conclude that ASH is negatively correlated with academic achievement, generally speaking. Even though high-achieving students frequently use these strategies, we will stand behind the fact that ASH is detrimental to self-esteem, and that it represents a maladaptive behavior that should be avoided.

So far, little data has been collected on the nature of academic self-handicapping strategies (and self-handicapping in general), and there is no research examining the factorial validity of the construct itself. Accordingly, the aim of the current study is to first examine the factor structure of the newly constructed academic self-handicapping instrument as well as to check its factorial, convergent, discriminative, predictive, diagnostic, and ecological validity. It should be noted that the only sound psychological instrument used for assessing ASH is the Academic Self-Handicapping Scale (Urdan & Midgley, 2001). In addition, there is a noticeable lack of self-handicapping instruments in Serbian language, in general. The only instrument available to us is the Self-Handicapping Questionnaire (In Serbian: Upitnik za procenu samohendikepiranja) by Mitrović, Smederevac & Čolović (2009), which assesses four types of Self-Handicapping strategies. One of them, Intrinsic Self-Handicaps in Achievement situations is particularly interesting to examine in regards to ASH. Previous research indicated that the instrument had good psychometric characteristics, so it was included in this research and used for validation.

Aim of the research

The goal of our research was to construct and validate an instrument for assessing academic self-

handicapping strategies. The motivation for the construction of the new scale arose from the lack of instruments that offer extensive and prognostically valid operationalizations of this construct. Previous research shows that the predictive validity of the construct is often lacking - despite the fact that there are a large number of operationalizations, most of them do not successfully predict academic achievement (Schwinger et al., 2014). Also, earlier instruments were getting outdated, as their focus lies in some behavioral tendencies that are not in use today. Lastly, our goal was to examine the validity of the newly constructed scale on a sample of Serbian high school and university students. We examined the factorial, convergent, discriminative and diagnostic validity of this instrument. Our aim was to examine not only the internal structure, but also the instrument's ability to predict school achievement, differentiate the university and high school student, and understand the nature of this phenomenon.

Method

Sample

The battery of tests was given to a convenient sample of 258 Serbian high school and university students, through distributing the battery via social media. Before performing all the analyses, nine subjects were excluded from the sample because they answered all the items with the same answer, so the analyzes were performed on a sample of 251 subjects. The sample consisted of 69.9% female and 30.1% male participants. The age of the respondents was between 15-51 years, while the average age was 19.35 years (SD = 3.307). The sample included 60.2% university students and 39.8% high school students.

Instruments and variables

We collected the data on sex, age, years of education, and student/high-schooler status and their GPA. We also asked two open-ended ques-

tions, as we wanted to see if students could observe ASH behavior in their actions and to see what they thought provoked this behavior. These variables can be found in Appendices 1 and 3.

SHAALA-22 instrument contains 22 items, without subscales, and measures the construct of academic self-handicapping. Answers are given on a five-point Likert scale (1 - Disagree entirely; 5 - Agree entirely), and the total score is calculated by summing the answers to the individual items, so the theoretically possible total score ranges from 22 to 110. The reliability of this test in the pilot study was α = .90. The instrument can be found in Appendix 2.

When constructing our instrument, we based ourselves primarily on previous conceptualizations of academic self-handicapping and handicapping strategies (ASHS; Urdan & Midgley, 2001), while attempting to overcome their shortcomings, as well as through shortened interviews with our colleagues. Our instrument, SHAALA-22, was constructed as an unidimensional questionnaire, as we grouped all strategies under one stratum.

HEXACO-60 was used for assessing the space of basic personality traits (Ashton & Lee, 2009) and it includes the domains of Honesty-Humility, Emotionality, Extraversion, Agreeableness, Conscientiousness, and Openness. Each domain is assessed via 10 items. The Serbian version of the scale demonstrated satisfactory metric characteristics (around α = .80; Međedović et al., 2017).

Self-Liking/Self-Competence Scale (SLCS) was used for assessing the self-esteem of the respondents, following the model of two-dimensional self-esteem which is constituted of Self-Liking and Self-Competence (Tafarodi & Swann, 1995). Scale consists of 16 items and the answers are given on a 5-point Likert scale (Ivanović, 2012). The reliability measures were high (around α = .90).

Self-handicapping assessment questionnaire (SH) was used for assessing the self-handicapping behaviors in general (Mitrović et al., 2009). Scale consists of 34 items, divided into 4 subscales:

External handicaps in interpersonal area, Internal handicaps in interpersonal area, Internal handicaps in achievement area and External handicaps in achievement area. The answers are given on a 5-point Likert scale and reliability measures were proven to be adequate (α = .70 - α = .91).

Procedure

The questionnaire was administered online, via Google Forms platform, and was shared through various social networks within student and high school groups. In the introductory part of the battery of tests, pupils were introduced to the purpose of the research and provided informed consent, after which they reported on demographic variables and their attitudes about education. After that, they filled out the instruments in the order listed above. Finally, they answered the behavioral items.

Results

Exploratory factor analysis

The suitability and justification for the use of the exploratory factor analysis (shortened EFA) was confirmed through the Kaiser-Mayer-Olkin measure and Bartlett's test of sphericity. The value of the Kaiser-Meier-Olkin measure of representativeness was .85, which indicates that the sample of the instrument's items is satisfactory and sufficiently representative. Bartlett's test of sphericity indicated that it is justified to use this factor analysis (χ^2 = 1566.749, df = 231, p < .01) as through this measure we concluded that the correlation matrix is significantly different from the identity matrix. Several criteria were used to retain the number of the extracted factors and verify the assumption of unidimensionality. Although Guttman-Kaiser criterion (Eigenvalue >1) suggested a 6-factor solution which would explain 57.87% of the total variance, Cattell's scree test and Horn's parallel analysis (Figure 1) weren't congruent with that conclusion. Relying on Horn's parallel analysis, an one-factor solution was retained for further analysis, which was the most interpretable and most stable one, and was in line with our assumption. We fixed the number of factors on one and repeated the analysis (Principal components analysis). All items saturated the first component. The first component explained 27.85% of the entire variance, which is satisfactory. Further analyzes were done with the empirically obtained summary score because we considered that there was no need to form a factor score on one component, given that unidimensionality was satisfied.

Figure 1. Scree plot of Horn's Parallel Analysis
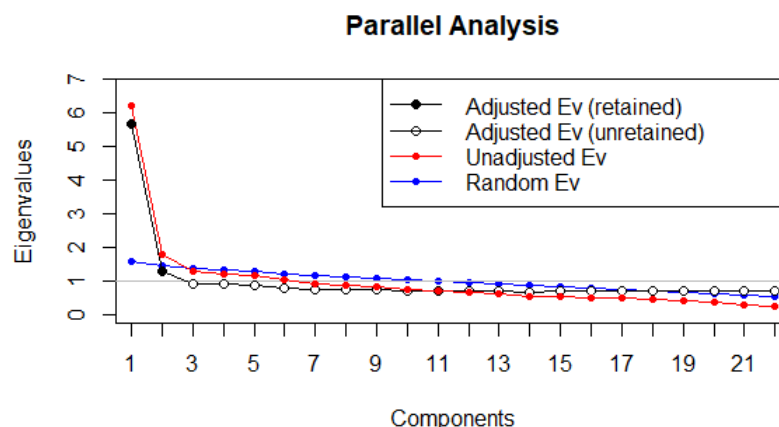
Psychometric characteristics of the instrument

Table 1 presents the descriptive metric characteristics of the SHAALA-22 instrument. The standardized skewness value indicates that the distribution is symmetrical, while the standardized kurtosis value, which is at the limit of significance, suggests that the distribution is slightly platykurtic. This indicates that a certain number of cases are distant from the arithmetic mean, implying that respondents provided more extreme answers to the test items. The Kolmogorov-Smirnov Z statistic indicates a significant deviation from normal distribution, as the significance level of this statistic is lower than the alpha-significance level of 0.05. Given that this test can sometimes overestimate the normality of the distribution, particularly with larger samples, it's necessary to examine the histogram, depicted in Figure 2. Upon examination, we observe a clustering around the arithmetic mean, corroborating the standardized skewness value. Additionally, there are some more extreme scores evident around scores 40 and 100, as indicated by the negative kurtosis value. However, we believe that this slight flattening of the distribution is not a cause for concern. Primarily, this is because the value of the standardized skewness is only marginally wider than the 95% confidence interval, and there is no indication of the subsequent normalization of the scores.

The analysis of the metric characteristics of our instrument was conducted using the RTT10G macro, with results displayed in Table 1. Metric characteristics of other instruments are detailed in Table 2. Regarding the metric characteristics of the SHAALA-22 instrument, Cronbach's alpha value is deemed satisfactory, indicating high reliability - meaning the test accurately measures its intended construct. Similarly, the Kaiser-Mayer-Olkin measure of representativeness is at a satisfactory level, suggesting high representativeness of items within the construct. The homogeneity measure H2 indicates a relatively high proportion of participation of the first principal component in the total variance of all components. Metric characteristics of other instruments are also acceptable and sufficiently high.

We conducted a thematic analysis regarding the open-ended questions which we asked our respondents. We wanted to examine if the respondents could map some kind of a root cause regarding ASH strategies. These findings should be used with retention, as they are just preliminary findings and a more voluminous and extensive qualitative study should be done to understand the phenomenology of ASH. The most frequent themes that we extracted were that respondents said that "uncertainty in themselves" (9%) is the main root, others said that "the fear of failure" is a main cause (10%), while some others said that "laziness" is the main cause (13%). These findings paint a somewhat broader picture of how respondents view ASH, and to fully understand the construct a large-scale qualitative study must be conducted.

Convergent and discriminant validity

The convergent and discriminant validity of our instrument was assessed through correlational analyses between the sum score on our instrument

Table 1. Psychometric characteristics of the SHAALA-22 instrument

	M	SD	zSk	zKu	α	KMO	H2	SE
SHAALA - 22	60.93	15.02	1.55	-1.98*	.87	.85	.63	5.40

*Note. M - Arithmetic mean; SD - Standard Deviation; zSk - Standardized Skewness; zKu - Standardized Kurtosis; α - Cronbach's α reliability coefficient; KMO - Kaiser-Mayer-Olkin representativeness coefficient; H2 - Knežević-Momirović homogeneity coefficient; SE - Standardized error of measurement; * p < .05.*

and the subscales of other instruments used in this study. Specifically, we expected lower correlations with the Extraversion, Openness, and Agreeableness traits from the HEXACO-60 instrument - indicating discriminant validity. Conversely, we anticipated higher correlations with all other subscales. We expected particularly strong correlations between academic self-handicapping and the Conscientiousness trait, as well as high correlations among subscales on the other SH questionnaire. The aforementioned correlations and their coefficients are shown in Table 2.

ASH and basic personality traits

When it comes to correlations between SHAALA-22 and basic personality traits, the highest correlations were found in Conscientiousness and Extraversion. This is interpreted as confirming convergent validity, given that many authors observed a pretty similar correlation between these two constructs (Čolović et al., 2009; Ross et al., 2002). It is reasonable to deduce that people who try to self-handicap their achievements, and who are not diligent in the way to organize themselves, will score lower on the trait of Conscientiousness. This trait potentially provides a good antecedent in understanding of the self-handicapping strategies, as it shares more than 25% of variance with ASH. The expected correlations with traits of Honesty-Humility and Extraversion were also obtained. If we check the correlations between ASH and facets of these traits (Appendix 4), we can reasonably assume that the individuals prone to ASH are lower on the social self-esteem and liveliness. Finally, we can conclude that ASH shouldn't be reduced to personality traits, as ASH strategies appear to be a combination of disorganization, the lack of motivation, and some kind of the lower self-esteem in individuals. Potentially, ASH can be seen as a sign of depression in young people and this will be further elaborated in the Discussion.

Table 2. Psychometric characteristics of the instruments and correlations with ASH

	α	KMO	H2	r with ASH
Honesty-Humility	.74	.84	.64	-.23**
Emotionality	.76	.85	.68	.12
Extraversion	.85	.94	.73	-.24**
Agreeableness	.74	.85	.65	-.14*
Conscientiousness	.77	.86	.71	-.53**
Openness to Experience	.83	.93	.78	-.10
Self-Competence	.64	.89	.74	-.43**
Self-Liking	.90	.98	.94	-.34**
Internal handicaps in interpersonal area	.86	.96	.80	.27**
External handicaps in interpersonal area	.65	.66	.58	.27**
External handicaps in achievement area	.58	.66	.81	.41**
Internal handicaps in achievement area	.57	.75	.74	.64**

*Note. ** p < .01; * p < .05; α - Cronbach's α reliability coefficient; KMO - Kaiser-Mayer-Olkin representativeness coefficient; H2 - Knežević-Momirović homogeneity coefficient; r with ASH - correlation coefficients between ASH and other variables.*

The correlations of ASH with other personality traits never exceed the value of .2, which can be taken as confirmation of the discriminant validity of our construct. Although the correlation with Agreeableness reaches statistical significance, that is to be expected due to the sample size. However, it is interesting to note that a nonsignificant correlation was obtained between ASH and Emotionality. However, through the analysis of the correlations between ASH and facets of Emotionality, we can produce a comprehensible explanation of this relation. ASH correlates with two very significant facets in the context of it (Fearfulness and Dependance). That is in line with the findings of lowered self-esteem of individuals prone to ASH and SH strategies, in gen-

eral. Also, we should keep in mind that Neuroticism from the FFM and Emotionality from HEXACO are two distinct conceptualizations of the emotional aspect of personality (Ashton & Lee, 2007). Initially, in earlier research, there was a positive correlation between ASH and Neuroticism (Ross et al., 2002), but as Emotionality issues are becoming different, they will be looked upon in the Discussion.

ASH and Self-esteem

The Self-esteem model that was assessed in this study consists of the social self-worth and personal efficacy. In line with previous findings (Midgley & Urdan, 1995), we observed very negative correlations between ASH and both of the proposed dimensions of self-esteem. In other words, people prone to ASH tendencies are expected to have lower self-esteem, especially in the space of self-efficacy. We argue that the main validatory agent of self-efficacy during late adolescence and young adulthood periods are achievements in academic and school context. Through various mechanisms, we believe that students and pupils construe their self-esteem through comparison with others. All this justifies the conclusion that the convergent validity of our instrument has been confirmed - SHAALA-22 is highly correlated with the dimensions of the Self-esteem model, as well as with the expected personality traits.

ASH and SH

Given that academic self-handicapping and self-handicapping are pretty similar constructs, with ASH being classified as a subdomain of global self-handicapping, positive correlations are justified and in line with our assumptions. However, there is a noticeable difference between correlations handicaps in interpersonal relationships and achievement situations. Academic self-handicapping, in our opinion, can be classified as a self-handicap in achievement situations, and higher correlations obtained for the two subscales that measure handicaps in achieve-ment situations are to be understood. However, the fact that even higher correlations were not obtained can be explained by the way in which these scales were conceptualized. Namely, the authors who formed the SH scale did not limit themselves only to the academic context, but included items related to work and general life situations in which it is possible to achieve a certain achievement.

Diagnostic validity

To assess diagnostic validity, we conducted various analyses according to statistical conditions (Tenjović, 2020). Non-parametric tests were chosen due to deviations from normality in our score distribution and the failure to meet the homogeneity of variance assumption for analysis of variance. First of all, we wanted to examine differences between high-schoolers and students and males and females, respectively. No statistically significant difference was found between male and female participants ($t = .873$, $df = 249$, $p > .05$), nor between high school students and university students ($t = .576$, $df = 249$, $p > .05$) in their utilization of the academic self-handicapping strategy.

Among the students, categorized by GPA, a statistically significant difference was detected using the Kruskal-Wallis test ($\chi2 = 17.220$, $df = 4$, $p < .05$). To discern which groups exhibited differences, post hoc tests with Bonferroni's correction were conducted. A distinction was observed between students with a GPA of 6.51-7.5 and those with a GPA of 9.51-10, as well as between students with a GPA of 7.51-8.5 and those with a GPA of 9.51-10. This suggests that the extent of self-handicapping strategies used varies depending on the average grade. Specifically, students with higher averages tended to score lower on our instrument, indicating reduced utilization of these strategies. Among high school students, a statistically significant difference was found between the categories separated by GPA ($\chi2 = 13.735$, $df = 4$, $p < .05$). Subsequently, post hoc tests were conducted with Bonferroni correction to

address the inflation of the significance level. Results indicated a difference only between excellent and very good students. It is noteworthy that there were insufficient respondents for the other categories, which may explain the lack of significant differences. Nevertheless, excellent students scored lower than very good students, suggesting lesser utilization of the self-handicapping strategies.

Finally, we conducted two canonical discriminant analyses to examine if there was a possibility to predict the group categorization in regards to score on SHAALA-22, as we observed significant statistical differences. Regarding classification of students, one significant canonical discriminant function (Rho = .305) was obtained, which can explain about 10% of the variance of the difference between these groups. Function at the group Centroids confirm earlier findings as students with higher GPA score lower on the function and are divided from the students with lower GPA. However, only 39.6% of students were correctly classified using this canonical function. Regarding the highschoolers, one significant canonical discriminant function (Rho = .402) was obtained, which can explain about 19% of the variance of the difference between these groups. Same as the university students, function at the group Centroids confirm earlier findings, as students with higher GPA score lower on the function and are divided from the students with lower GPA. Classification percentage was better, as 66% of students were correctly classified using this canonical function.

Discussion

From the gathered empirical data, we can conclude that our instrument has sound psychometric characteristics. Reliability, representativity, and homogeneity statistics are all in the higher and satisfactory ranges. The retained first principal component explained almost 28% of the original variance, as all of the items fall upon the first compo-

nent. However, a large chunk of variance stands unexplained - we only had 22 items in our instrument, and we think that ASH can be manifested in a variety of ways. We think that if we could create a more comprehensible operationalisation of many more manifestations of this construct, the explained variance of the items will be much higher. This will be addressed again in the following text. The convergent/discriminant validity of our model has largely been confirmed, while its capability to differentiate between groups of university students and high schoolers stands limited, as well as its capability to differentiate between the groups of students categorized by GPA.

Regarding the factorial structure of our instrument - we believe that we did not observe many manifestations of ASH with it. As it can be seen, only 28% variance of the items stands explained by the first principal component and KMO measure can be even higher. This finding aligns with our presumption that this construct is unidimensional. However, the items were formulated without an explicit reference to theoretical assumptions regarding the existence of the subscales. Therefore, we can surmise that the constructing items aimed at capturing various types of academic self-handicapping would likely yield a different factor structure. While our study confirms the presence of a global, unidimensional component of academic self-handicapping, it does not necessarily imply that it is strictly unidimensional. Rather, we believe that isolating certain subscales would subsequently form a higher-order factor. Thus, the assumption of unidimensionality would not be violated - rather, it would be further elaborated. Determining the second-order factors would contribute to a deeper comprehension of the construct, as it would clarify the relationship between individual strategies and behaviors illustrated by the items and the higher-order factor characterized as global academic self-handicapping.

We would like to draw attention to the relationship between ASH and the dimension of Con-

scientiousness of the HEXACO model. We obtained a high negative correlation between those two constructs, as it was expected from earlier studies (Conrad & Patry, 2012; Čolović et al., 2009; Ross et al., 2002). Even before we began, we actively considered the possibility that our construct could actually be reduced to the trait of Conscientiousness, at least to a large degree. However, although there are significant correlations between the obtained factor and the Conscientiousness trait, we believe that our results suggest that ASH is not reducible to the manifestations of Conscientiousness in an academic setting. Conscientiousness enables us to explain approximately 25% of the variance of our construct. However, this suggests that proneness to ASH of an individual is also determined by other factors to a large degree, which would be the subject of future research. Finally, we should explicitly state that ASH is a combination of the lower Conscientiousness and lower Self-esteem. We deduced this through obtained correlations between ASH and Extraversion, facets of Emotionality and Self-Liking and Self-Competence dimensions of Self-esteem. Higher Extraversion and lower Emotionality sometimes get called "healthy personality" (Bleidorn et al., 2020). If we accept this assumption, we can conclude that ASH is quite the opposite. ASH consists of the lower X and higher E. Individuals prone to ASH are more anxious, disorganized, prone to depression and have lower self-esteem levels than average. Connected with our hypothesis is a finding from an earlier study that suggests that ASH is positively correlated with depression, anxiety and stress (Sahranç, 2011). This leads us to a conclusion that ASH can potentially be a symptom of depression in high schoolers and students. As depressive individuals report lower levels of self-esteem and lower Extraversion (Chioqueta & Styles, 2005; Torres et al., 2016), this is a hypothesis that should be tested in another study.

One may wonder why the observed correlations differ from previous studies. We believe that the solution lies in the different constructions of the traits between Big 5 and HEXACO models of per-

sonality (Ashton & Lee, 2007). The correlation with the Extraversion trait is not surprising given that facets associated with academic self-handicapping, such as Social self-esteem, social boldness, and liveliness, play a pivotal role in shaping an individual's self-confidence. The negative correlation suggests that individuals with lower levels of self-esteem are more inclined to employ such strategies, consistent with prior research findings. The absence of correlation with Extraversion from the Big 5 model can be attributed to its structural focus, which does not encompass the domain of self-esteem as observed in the HEXACO model. Regarding the negative correlation with the Cooperative trait, specifically with the facets of Patience and Flexibility, it indicates that individuals characterized by stubbornness and inflexibility are more prone to academic self-handicapping behaviors. The correlation with the Emotionality trait is noteworthy, given its structural differences from its counterpart, Neuroticism, in the Big 5 model. Emotionality within the HEXACO framework may encompass a broader sensitivity to emotions rather than focusing solely on negative emotions. While weak correlations were observed with facets related to the „negative" aspects of this trait (Dependency and Fearfulness), the overall correlation remains inconclusive due to the aforementioned structural differences. Finally, the relation of ASH and Honesty should be further understood in other studies.

As it can be seen, our instrument shows a limited capability in differentiating groups of students and predicting GPA classification. However, as it was stated earlier, the findings regarding the differences between males and females are not clear (Čolović et al., 2007; Midgley et al., 1996). On the other hand, the unobserved differences between high-schoolers and students are not entirely unexpected. We believe that ASH strategies differ between these two groups, something that cannot be identified by using just the instrument. We recommend that future studies use IRT models and invariance models to assess whether there are different loadings of the items between

two groups of students (Bowen & Masa, 2015). We would also like to point out the problem with our operationalization of academic achievement - we used categorical variable to assess GPA. It is not the best way to assess this data, as categorical variables reduce variance in regard to numerical variables. Researchers should conscientiously choose the types of variables serving as indicators of academic achievement, with the goal of selecting those that accurately reflect an individual's abilities within an academic context. Additionally, future research should prioritize the examination of variables conducive to meaningful comparisons between respondents.

Finally, we shall conclude our discussion with an idea that we think can produce a rich field of research. There is evidence that ASH is produced by an inability of students to meet academic expectations (Midgley & Urdan, 2001). One important notion is the observed correlation between ASH and Self-Handicapping in the Achievement area. In other words, we can define the construct of ASH as a form of self-handicapping in achievement situations. This finding is new and should definitely be checked further. Related to this is a fact that our respondents' mapped "fear of failure" and "achievement expectations" as one of the most frequent root causes of ASH. We can conclude that our participants believe that academic context bears problems with achievement. Following this current of thought, we will shortly address the possibilities of interactive and peer-centered education. We are strong proponents of these types of education and we think that a shift is needed in our education policies. As it is stated in earlier studies, students are heavily influenced by expectations and pathologically focused on achievement (Anderman & Maehr, 1994). They value themselves through their achievements in school and university. If they are not fulfilled, these things can produce mental health issues, which further provokes academic self-handicapping behavior. We think that ASH is a manifest issue and that its causes are deeply rooted in the psychological system of a person. Therefore, we would like to research this topic even further, focusing more on the individual phenomenological systems to understand dynamics of the psyche regarding academic self-handicapping.

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APPENDICES

Appendix 1. *Socio-demographic variables*

D1. Kojeg ste pola?
1. Muški
2. Ženski
3. Ne želim da se izjasnim

D2. Koliko imate godina? _____

D5. Ako ste srednjoškolac, koji Vam je bio uspeh na prošlom polugodištu?
1. nedovoljan
2. dovoljan
3. dobar
4. vrlo dobar
5. odličan

Ako ste student, koji Vam je bio prosek pred početak ovog semestra?
1. 6–6,5
2. 6,51–7,5
3. 7,51–8,5
4. 8,51–9,5
5. 9,51–10

Appendix 2. *SHAALA-22*

1. Kada učim, trudim se da uvek dam sve od sebe.*
2. Tražim opravdanja za svoje neuspehe.
3. Svoje neuspehe pripisujem lenjosti.
4. Odlažem stvari do poslednjeg trenutka, i to je razlog za neke od mojih neuspeha.
5. Tokom učenja dopuštam da mi misli odlutaju.
6. Kada učim, dozvoljavam sebi da pravim duže pauze, i to je jedan od razloga za moje neuspehe.
7. Razlog zašto ne prolazim dobro na obimnim predmetima je taj jer ih spremam prekratko.
8. Pričam ljudima kako nisam dovoljno učio/la da ne bih ispao/la glup/a.

9. Namerno radim aktivnosti koje mi oduzimaju vreme za učenje da bih ih koristio/la kao izgovor.

10. Kada ne postignem ono što sam želeo/la, kao opravdanje koristim svoja emocionalna stanja.

11. Gubim vreme na internetu da ne bih razmišljao/la o gradivu koje treba da učim.

12. Previše vremena provodim na društvenim mrežama, i to je razlog za moj neuspeh.

13. Više pažnje posvećujem svojim hobijima kada znam da treba da učim ozbiljno.

14. Jedan od razloga za moj neuspeh je to što za stvari za koje mislim da su zahtevne ulažem manje truda.

15. Kada se dogovorim sa društvom da učimo grupno, uvek priča ode u svakom smeru, osim onom u kom treba da ide, pa se svi loše pokažemo na testu.

16. Nekada imam osećaj kao da bežim od svojih školskih obaveza.

17. Čini mi se da su moji razlozi za neuspehe ti jer sam uvek umoran/na.

18. Uglavnom shvatim da mi je soba u haosu pred test/ispit, pa ceo dan provedem čisteći je, umesto da učim. Barem se jednom desilo da sam zbog toga pao/la.

19. Padam zbog toga što upadam u emocionalno rastrojstvo pred testove/ispite.

20. Padnem zbog toga što mi misli landaraju dok učim.

21. Gubim vreme tako što obraćam pažnju na objektivno najnebitnije stvari (tako što gledam teksturu stola, npr.) te zbog toga lošije odradim test.

22. Izađem sa partnerom ili prijateljima kad treba da učim, što je razlog za moj neuspeh.

Appendix 3. *Open-ended questions*

Određenim testovima u ovoj bateriji ispitivan je fenomen tzv. akademskog samohendikepiranja. Samohendikepiranje predstavlja stvaranje prepreka koje onemogućavaju uspešno izvođenje zadatka koji pojedinac smatra važnim. Akademsko samohendikepiranje predstavlja vid samohendikepiranja i odnosi se na prepreke koje pojedinac stvara da bi opravdao loš učinak u okviru specifično akademskog konteksta – na ispitu, kolokvijumu ili kontrolnom zadatku. Na primer, namerno odlažete učenje do poslednjeg trenutka, da biste kasnije rekli da nemate dovoljno vremena da naučite gradivo i da ste zbog toga loše odradili test, odnosno ispit.

Imajući u vidu ovu definiciju i primer, molimo Vas da odgovorite na sledeća pitanja:

1. Da li mislite da na ovaj način pravdate svoje neuspehe? DA/NE

2. Koji je, po Vašem mišljenju, uzrok pravdanja na ovaj način? _____.

3. Po Vašem mišljenju, ko ili šta može pomoći pri rešavanju ovog problema? _____.

Appendix 4. *Correlations of ASH with facets of the HEXACO-60 inventory*

Table 1. Correlations of the summary score on the SHAALA - 22 instrument and Honesty.

	Sincerity	Fairness	Greed Avoidance	Modesty
SHAALA-22	-.136*	-.227**	-.161*	-.066

*Note: **p<.01; *p<.05*

Table 2. Correlations of the summary score on the SHAALA - 22 instrument and Emotionality.

	Fearfulness	Anxiety	Dependance	Sentimentality
SHAALA-22	.125*	.058	.132*	.026

*Note: **p<.01; *p<.05*

Table 3. Correlations of the summary score on the SHAALA - 22 instrument and Extraversion.

	Social Self-Esteem	Social Boldness	Sociability	Liveliness
SHAALA-22	-.336**	-.145*	-.053	-.203**

Note: **p<.01; *p<.05

Table 4. Correlations of the summary score on the SHAALA - 22 instrument and Agreeableness.

	Forgivingness	Gentleness	Flexibility	Patience
SHAALA-22	.032	-.046	-.239**	-.154*

Note: **p<.01; *p<.05

Table 5. Correlations of the summary score on the SHAALA - 22 instrument and Conscientiousness

	Organisation	Dilligence	Perfectionism	Prudence
SHAALA-22	-.450**	-.521**	-.192*	-.442**

Note: **p<.01; *p<.05

Table 6. Correlations of the summary score on the SHAALA - 22 instrument and Openness.

	Aesthetic Appreciation	Inquisitiveness	Creativity	Unconventionality
SHAALA-22	-.077	-.137*	-.033	-.010

Note: **p<.01; *p<.05

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SHAALA-22: ИЗРАДА И ВАЛИДАЦИЈА
НОВЕ СКАЛЕ АКАДЕМСКОГ САМОХЕНДИКЕПИРАЊА

Конструкт самохендикепирања је дефинисан као сопствено креирање препрека које заустављају успешно извршавање неког задатка (Berglas & Jones, 1978). Циљ самохендике-пирајућих стратегија јесте одржавање сопственог самовредновања тако што се екстер-нализује узрок за потенцијални неуспех, али се сопствени осећај компетентности повећа-ва уколико дође до успеха упркос тим препрекама (Jones & Berglas, 1978). Са друге стране, академско самохендикепирање представља конструкт којим се дефинише коришћење ових стратегија у образовном контексту (Urdan & Midgley, 2001). Ученици често доживљавају претње свом самопоштовању у школском и академском контексту (Pullmann & Allik, 2008). Ове претње често произилазе из страха од неуспеха у предстојећим ситуацијама постиг-нућа, као што је кључни испит. Аутори верују да је често коришћена психолошка страте-гија за регулисање претње самопоштовања самохендикепирање или, прецизније, академско самохендикепирање (Schwingeretal, 2014). Другим речима, коришћење стратегија самохен-дикепирања омогућава ученицама и студентима да помере узрок неуспеха са унутрашње атрибуције („Пао сам испит јер сам глуп") на спољни фактор („Синоћ сам изашао са прија-тељима. Наравно да сам пао испит када сам попио мало више и нисам се наспавао"). Дру-гачије речено, академско самохендикепирање има протективну функцију за особу, односно оно омогућава да самопоштовање (колико год оно било високо или ниско) буде одржано и остане непромењено упркос доживљеном неуспеху.

Циљ ове студије био је да се конструише и валидира нови инструмент за процену академског самохендикепирања (SHALLA-22). Ослањајући се на већ постојеће инструменте који су имали за циљ операционализацију академског самохендикепирања (Urdan & Midgley, 2001) и кроз анализу сопствених искустава кроз школовање и разговоре са колегама, фор-мирали смо инструмент који је након пилот-студије имао 22 ставке. Инструментом смо покушали да мапирамо најчешћа понашања која се могу окарактерисати као самохендике-пирајућа и која се могу пронаћи код већинепопулације студената и ученика. Циљ је био да направимо инструмент који би имао добре психометријске карактеристике, као и добру-конструкт, дијагностичку и прогностичку ваљаност.

У истраживању је учествовао 251 испитаник: средњошколаца (39,8%) и студената (60,2%). Било је више испитаница (69,9%) него испитаника (31,1%). Просек година испита-ника је био M=19.35 (SD=3.31). Батерију инструмената коју су испитаници попуњавали сачињавали су наш инструмент академског самохендикепирања (SHALLA-22), инвентар личности HEXACO-60 који мери шест базичних црта личности (енг. Honesty, Emotionality, eXtraversion, Aggreableness, Conscientiousness, Openness to experience)(Ashton & Lee, 2007), Ска-

ла самосвиђања и самокомпетентностикоја мери два домена самопоштовања (*Tafarodi & Swann, 1995*) и Упитник за процену самохендикепирања који је развијен специјално за наше говорно подручје, а који мери четири врсте самохендикепирајућих понашања (*Mitrović et al., 2009*).Експлораторном факторском анализом идентификовали смо једну компоненту која објашњава 28% укупне варијансе и која засићују све ставке нашег инструмента. Стога, било је оправдано формирати сумарни скор, где виша постигнућа упућују на чешће коришћење академски самохендикепирајућих стратегија. Психометријске карактеристике су биле задовољавајуће (α=.87; КМО=.85; H2=.63). Конвергентна и дискриминантна валидност тестиране су корелационим анализама са субскалама осталих коришћених инструмената. Академско самохендикепирање је било у снажној негативној корелацији са савесношћу (*r=-.53*), самокомпетентношћу (*r=-.43*), самосвиђањем (*r=-.34*), екстраверзијом (*r=-.24*) и поштењем (*r=-23*), позитивно повезано са емоционалношћу (*r=.12*) и четири стратегије самохендикепирања (*r=.27-.64*). Инструментом нису пронађене нити полне разлике нити разлике између средњошколаца и студената. Ипак, унутар самих група студената (χ2= 7.220, df=4, p<.05) и средњошколаца (χ2=13.735, df=4, p<.05) пронађене су разлике у поткатегоријама које су формиране по просеку испитаника. Пост-хок тестовима показано је да и студенти и средњошколци са вишим просецима се мање користе самохендикепирајућим стратегијама од својих вршњака са нижим оценама. Дискриминациона анализа указује на не тако добру способност инструмента да тачно разликује ученике по просеку (66%), док је имао још слабији успех у тачном разликовању студената по просеку (39,6%).

Можемо закључити да наш инструмент има добре психометријске карактеристике и да је већина хипотеза о ваљаности потврђена. У раду дискутујемо о потенцијалном разумевању академског самохендикепирања као манифестације депресије у школском контексту и да основни узрок ових понашања лежи у школском систему оријентисаном на постигнућа. Закључујемо да се наш инструмент може користити за процену академског самохендикепирања студената и средњошколаца и може послужити као корисно средство за разумевање психолошких система студената и ученика.

Кључне речи: академско самохендикепирање, самохендикепирање, конструкција инструмента, валидација инструмента