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Short Communication

Serbian adaptations of the Dark Triad Dirty Dozen (DTDD) and Short Dark Triad (SD3)

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ABSTRACT

We conducted three studies to examine the psychometric properties of the Serbian translations of the Dark Triad Dirty Dozen (Study 1, $N = 364$) and the Short Dark Triad (Study 2, $N = 409$), as well as their convergent and discriminant validity in relation to basic HEXACO personality traits and empathy (Study 3, $N = 443$). The three-factor structure, convergent validity, and discriminant validity were confirmed for both instruments. The main correlates of the traits, from both instruments, were low Honesty-Humility and lack of affective empathy. Also, alpha coefficients for scale scores were satisfactory and scale information was good, with more precision in above-average levels of trait for some of the scales (e.g., psychopathy). Both instruments are recommended to be used in further research.

1. Introduction

There is a "dark" thread growing in personality psychology, along with work on the Big Five and, especially, the HEXACO personality model. The Dark Triad traits (Paulhus & Williams, 2002) are Machiavellianism (i.e., manipulativeness and cynism), psychopathy (i.e., callousness, impulsivity, and lack of remorse), and narcissism (i.e., a sense of grandiosity and entitlement). Collectively, the traits are characterized by limited empathy (Paulhus & Jones, 2015), especially affective aspects of empathy (Wai & Tiliopoulos, 2012), and disagreeableness, dishonesty, and limited humility (Book, Visser, & Volk, 2015; Lee et al., 2013; Međedović, 2012). The traits are distinguished by unique relationships like narcissists showing evidence of extraversion and those high in psychopathy showing limited conscientiousness (Lee et al., 2013). To facilitate this research, two brief measures have been developed. The first of these is the Dark Triad Dirty Dozen (DTDD; Jonason & Webster, 2010) which was followed by the Short Dark Triad (SD3; Jones & Paulhus, 2014). These measures have been translated and validated in other languages (e.g., Özsoy, Rauthmann, Jonason, & Ardıç, 2017), but more work is needed. We present a series of studies that translate and adapt these two measures into Serbian and then validates them both in a further study.

There is considerable evidence for the validity of these measures in terms of relationships with their full-length measures, test-retest validity, internal consistency, structural properties, and efficacy in answering research questions (Jonason & Webster, 2010; Jones & Paulhus, 2014). However, there are some concerns about each measure which is unsurprising given their relative brevity in relation to the full-length measures and other psychometric problems associated with brief measures. One of the issues is whether there are actually three traits captured or, instead, a narcissism factor and a combined psychopathy-Machiavellianism factor (e.g., Carter, Campbell, Muncer, & Carter, 2015; Egan, Chan, & Shorter, 2014). However, we expect that our measures will capture three inter-related and distinguishable traits as evidence of their validity.

Another concern is the validity of these short measures, especially in relation to the DTDD. This measure is so short that is might have insufficient breadth to capture some aspects of psychopathy and narcissism capture both vulnerable and grandiose facets (Maples, Lamkin, & Miller, 2014). However, Jonason and Luévano (2013) have shown that the DTDD narcissism captures six of the seven aspects of the Narcissistic Personality Inventory, which is a measure of grandiose narcissism. In addition, work on other traits, like those found in the HEXACO, suggest the DTDD (Jonason & McCain, 2012) and the SD3 (Book et al., 2015) are valid measures of the Dark Triad traits. Importantly, we can assess the relative validity in the DTDD and the SD3 in relation to the HEXACO and empathy. Given that the low Honesty-Humility and lack of affective empathy represent the common characteristics of the Dark Triad traits (e.g., Book et al., 2015; Wai & Tiliopoulos, 2012), we expected that these traits would be the main correlates of dark traits from

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Table 1
Descriptive statistics and gender differences for the DTDD and SD3.

		Total sample			α	Men		Women		Sex difference	
		M	*SD*	MIC		*M*	*SD*	*M*	*SD*	*t*	*d*
Study 1 (*N* = 364)											
DTDD	Machiavellianism	10.46	5.71	0.66	0.88	11.31	6.25	10.00	5.35	2.11*	0.23
	Psychopathy	11.16	5.49	0.46	0.77	12.50	5.74	10.42	5.21	3.52***	0.38
	Narcissism	14.41	5.26	0.50	0.80	14.74	5.42	14.23	5.18	0.89	0.10
Study 2 (*N* = 409)											
SD3	Machiavellianism	27.13	5.98	0.29	0.78	28.18	5.98	26.28	5.89	3.20***	0.32
	Psychopathy	19.32	5.30	0.21	0.70	20.76	5.26	18.10	5.02	5.18***	0.52
	Narcissism	26.08	5.20	0.21	0.70	26.75	5.14	25.56	5.23	2.29*	0.23
Study 3 (*N* = 443)											
DTDD	Machiavellianism	9.67	6.02	0.69	0.90	10.52	6.60	8.81	5.24	3.02**	0.28
	Psychopathy	10.36	5.08	0.36	0.69	11.30	5.33	9.42	4.63	4.99***	0.38
	Narcissism	12.38	5.93	0.56	0.84	12.93	5.93	11.82	5.90	1.97*	0.19
SD3	Machiavellianism	27.35	6.70	0.30	0.80	28.74	6.34	25.96	6.77	4.46***	0.43
	Psychopathy	17.54	6.11	0.27	0.77	19.55	6.42	15.52	5.03	5.77***	0.70
	Narcissism	24.29	6.78	0.25	0.74	25.53	6.48	23.05	6.87	3.91***	0.37

Note. MIC = mean inter-item correlation, *d* = Cohen's *d* for effect size, *df* in Study 1 was 362, in Study 2 was 403, and in Study 3 was 441.
* $p < .05$.
** $p < .01$.
*** $p < .001$.

Table 2
Fit indices for the DTDD and SD3.

	Model	DWLSχ^2 (*df*)	CFI	TLI	RMSEA	SRMR
Study 1 (*N* = 364): DTDD	1	267.02 (54)	0.92	0.90	0.10	0.11
	2	137.55 (53)	0.97	0.96	0.07	0.08
	3	84.73 (51)	0.99	0.98	0.04	0.06
Study 2 (*N* = 409): SD3	1	906.08 (324)	0.88	0.87	0.07	0.08
	2	678.86 (323)	0.92	0.92	0.05	0.07
	3	645.59 (321)	0.93	0.92	0.05	0.07

Note. 1 = 1-factor model, 2 = 2-factor model with Machiavellianism and psychopathy combined, 3 = 3-factor model. All χ^2s were significant at $p < .001$.

both instruments. And as evidence of the validity of the adaptations, we expect to find higher mutual correlations between matching-scales (e.g., Machiavellianism scales from both instruments).

In this study, we present Serbian adaptations of the DTDD and SD3 using classical test theory (CTT) and item response theory (IRT). In Study 1 and 2, we adapted the DTDD and the SD3 (respectively) into Serbian and test their psychometric properties independently. In Study 3, we examine the validity of these adaptations by assessing the nomological network surrounding each trait in relation to a measure of basic personality traits and individual differences in empathy.

2. Method

2.1. Participants and procedure

Study 1 included 364 students (35.4% men), aged between 18 and 28 years ($M = 20.73$, $SD = 1.76$). The students participated in the study for course credits at their respective Universities. Study 2 included 409 participants (43.5% men, for 4 participants information about sex was missing) from the general population, aged between 18 and 76 years ($M = 27.55$, $SD = 10.52$), with 53.1% of the sample comprised of students. Study 3 included 443 participants (50.1% men) from the general population, aged between 19 and 49 years ($M = 28.13$, $SD = 6.66$), different education levels. Participants from all studies were from Serbia with Serbian as their first language. Data in Study 2 and 3 was collected by trained undergraduate students as a part of their pre-exam activity. Each student had to collect data from a specific number of participants based on given sex and age quotas in order to get a heterogeneous sample.

2.2. Instruments

In Study 1, the Dark Triad Dirty Dozen (DTDD; Jonason & Webster, 2010) – Serbian adaptation was used (see Tables C and D in Appendix). The DTDD consists of 12 items with a 7-point Likert scale (form 1 = *strongly disagree* to 7 = *strongly agree*), which measures three dark traits (4 items per scale): Machiavellianism, psychopathy and narcissism. In Study 2, the Short Dark Triad (SD3; Jones & Paulhus, 2014) – Serbian adaptation was used. SD3 consists of 27 items with a 5-point Likert scale (fom 1 = *strongly disagree* to 5 = *strongly agree*), which measure three dark traits (9 items per scale). In Study 3, both DTDD and SD3 were used (Cronbach's alphas in all studies are presented in Table 1) along with HEXACO-60 and ACME. HEXACO-60 (Ashton & Lee, 2009, for Serbian adaptation see Međedović, Čolović, Dinić, & Smederevac, 2017) is a short version of HEXACO-PI-R and contains 60 items which measure six basic lexical HEXACO traits (each per 10 items, Cronbach's alpha of scores ranged from 0.71 to 0.86). Affective and Cognitive measure of Empathy (ACME: Vachon & Lynam, 2015) contains 36 items (12 per scale) and measures cognitive empathy (α = 0.90), affective resonance (α = 0.81), and affective dissonance (α = 0.86).[1] Both HEXACO-60 and ACME have items with a 5-point Likert scale (fom 1 = *strongly disagree* to 5 = *strongly agree*). All instruments were forward translated by native Serbian-speaking author, independently, back-translated by another Serbian-speaking author, and approved by a third, English-speaking co-author.

2.3. Data analysis

In all studies, we report descriptive characteristics, mean inter-item correlations (MIC), Cronbach αs, and sex differences were calculated (i.e., *t*–tests and Cohen's *d*). Because multivariate normality was violated, robust diagonal weighted least squares (DWLS) estimator in CFA was used ("lavaan" R package; Rosseel, 2012). Several fit indices were used to determine model fit: χ^2, comparative fit index = CFI, Tucker-Lewis index = TLI, root mean square error of approximation = RMSEA, and standardized root mean residual = SRMR. Although there were no absolute standards, determining the model fit requires a consideration

[1] Because this is the first use of Serbian adaptation of ACME, a CFA was conducted and resulted in good model fit (DWLS $\chi^2(591) = 1019.83$, $p < .001$, CFI = 0.96, TLI = 0.96, RMSEA = 0.04, SRMR = 0.07).