



## Short Communication

# Reliability and validity of the Turkish versions of Dark Triad Dirty Dozen (DTDD-T), Short Dark Triad (SD3-T), and Single Item Narcissism Scale (SINS-T)

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## ABSTRACT

The Dark Triad Dirty Dozen (i.e., DTDD), Short Dark Triad (i.e., SD3), and the Single Item Narcissism Scale (i.e., SINS) were adapted into Turkish and validated ( $N = 368$ ). We examined internal consistency, factor structures, and convergent and discriminant validity of the scales using the Mach-IV, LSRP, NPI-16, Rosenberg's self-esteem scale, and Big Five scales. The Turkish versions of the scales had good psychometric properties and can be used in further research.

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## 1. Introduction

In recent years, there has been increasing interest in the Dark Triad traits (Furnham, Richards, & Paulhus, 2013). This has led to the development and validation of several brief and efficient assessment tools (Maples, Lamkin, & Miller, 2014), such as the Dark Triad Dirty Dozen scale (DTDD; Jonason & Webster, 2010), the Short Dark Triad (SD3; Jones & Paulhus, 2014), and the Single Item Narcissism Scale (SINS; Konrath, Brian, & Bushman, 2014). Short scales are more economical, are less burdensome on participants, and often have comparable psychometric properties to their longer, parent measures (Ames, Rose, & Anderson, 2006). Thus, as long as concise scales adequately capture the same latent traits measured in longer scales, using them could be advantageous for both participants and researchers.

Despite some criticism concerning brief measures (Smith, McCarthy, & Anderson, 2000), there is no concise Dark Triad scale available in Turkish language yet. Therefore, we aimed to translate and test the psychometric properties of Turkish adaptations of the Dark Triad Dirty Dozen-Turkish (DTDD-T), the Short Dark Triad-Turkish (SD3-T), and the Single Item Narcissism Scale-Turkish (SINS-T). Turkey, with around 75 million people, is a geographically critical country in terms of political issues and, thus, assessments of the Dark Triad traits might be useful.

Further, validating the brief Dark Triad scales is expected to increase the number of cross-cultural studies.

## 2. The Current Study

To adapt the DTDD, SD3, and SINS to Turkish, we report reliability estimates (i.e., Cronbach's alphas), factorial validity (i.e., using confirmatory factor analysis, CFAs), and construct validity (i.e., convergent and discriminant in a multi-trait multi-method matrix). For the latter, we used well-known scales, such as the Mach-IV (Christie & Geis, 1970), Levenson's Self-Report of Psychopathy (Levenson, Kiehl, & Fitzpatrick, 1995), NPI-16 (Ames et al., 2006), Big Five Inventory (van Someren, Barnard, & Sandberg, 1994), and Rosenberg's Self-esteem scale (Rosenberg, 1965).

We formulated several expectations. First, consistent with the original scales, we expected at least satisfactory if not high internal consistency in the scales. Second, we expected clear factorial structures of the Turkish adaptations as the English original versions have already been created with great care to maximum factor distinction. Third, we expected good construct validity regarding nomological correlations with other scales. In terms of convergent validity we expected the Turkish scales to be substantially and positively correlated with established parent scales of the respective constructs. In terms of discriminant validity, we expected the hetero-trait mono-method as well as the hetero-trait hetero-method correlations to be weaker than the mono-trait hetero-method correlations (i.e., discriminant correlation coefficients

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should be weaker than convergent correlation coefficients). Additionally, the Turkish scales should be negatively related to agreeableness (Paulhus & Williams, 2002), and especially narcissism and psychopathy positively related to extraversion (Paulhus & Williams, 2002). Additionally, we examined correlations with self-esteem, especially given its relations with narcissism (e.g., Jonason & Webster, 2010). Finally, we expected that men would score higher on all Dark Triad scales than women – a common finding in Dark Triad research around the world (Jonason et al., 2017).

### 3. Method

#### 3.1. Participants and Procedure

We sampled 368 management students from Sakarya University, Faculty of Management (75% female; age:  $M = 20.30$ ,  $SD = 2.17$ ,  $range = 18–39$  years) for a validation of the Turkish scale adaptations. Paper-pencil questionnaires were distributed only to voluntary students. No compensation was offered. Sloppy and missing questionnaires were excluded (around 10%). The data of this study can be found openly available at <https://osf.io/79tx6/>

#### 3.2. Scale Construction

Thirty academics participated in a pilot study working at Sakarya University, Faculty of Management. The English versions of the DTDD, SD3, and SINS were translated to Turkish independently by two separate professional translation companies, one linguist, and two academics. After that, a group of academics discussed all translations and decided on one fixed translation for each item. Next, a pilot study was performed with 30 people (i.e., academic staff) to get feedback for each item regarding its eligibility for Turkish culture and language. A “thinking-aloud-method” (van Someron et al., 1994) was used where participants were asked to explain what came to their mind, and items were discussed subsequently. Following feedback from participants, the SD3 psychopathy item “I enjoy having sex with people I hardly know” was replaced with the item “I like to pick on losers” with the permission of D. Paulhus (personal communication). Lastly, the Turkish translation was back-translated into English independently by two linguists. Inspecting these translations again resulted in some minor changes to the Turkish items. The current study uses the final items after these changes.

#### 3.3. Measures

We used our Turkish adaptations of the DTDD-T (12 items; 5-point Likert-type responses), SD3-T (27 items; 5-point Likert-type responses), and the SINS-T (1 item; 7-point Likert-type responses). Instructions, items, and response formats were in line with the English originals. Averages were used for the SD3-T and the DTDD-T. The Turkish version (Sümer, Lajunen, & Özkan, 2005) of the 44-item Big Five Inventory (Benet-Martinez & John, 1998) was used with 5-point Likert-type responses. Narcissism was assessed with the Turkish version (Atay, 2009) of the 16-item Narcissistic Personality Inventory (NPI-16; Ames et al. (2006). For each item, participants chose one of two statements they felt applied more to them, either a narcissistic or non-narcissistic statement. Narcissism-endorsements were summed to create a NPI-16 total score. The Turkish version (Engeler, 2005) of the 26-item Levenson Self-Report Psychopathy Scale (Levenson et al., 1995) was used with 4-point Likert-type responses to assess subclinical psychopathy. Using averages, we formed the subscales *primary psychopathy* and *secondary psychopathy* as well as a global psychopathy scale. The Turkish version (Engeler, 2005) of the 20-item Mach IV (Christie & Geis, 1970) was used with 5-point Likert-type responses to assess Machiavellianism. Items were averaged to create a single measure of Machiavellianism. The Turkish version (Çuhadaroglu, 1986) of Rosenberg's

(1965) 10-item Self-Esteem Scale was used with 4-point Likert-type responses to assess global self-esteem. Items were averaged to create a single index of self-esteem.

### 4. Results

Table 1 shows internal consistencies ( $range: 0.67–0.83$ ), which were all acceptable and comparable to the ones from the longer scales ( $range = 0.68–0.84$ ). We used CFAs to test the factor structure of DTDD-T and SD3-T. The three-factor model fit the data well for DTDD-T,  $\chi^2 = 103.67$ ,  $p < 0.01$ ,  $\chi^2/df = 2.03$ , TLI (Tucker–Lewis index) = 0.95, CFI (comparative fit index) = 0.96, RMSEA (root mean square error of approximation) = 0.05. The three-factor model fit the data adequately for SD3-T as well,  $\chi^2 = 708.38$ ,  $p < 0.01$ ,  $\chi^2/df = 2.21$ , TLI = 0.79, CFI = 0.81, RMSEA = 0.06. Factor loadings (in terms of standardized regression weights) ranged from 0.43 to 0.91 for the DTDD-T and from 0.32 to 0.69 for the SD3-T. In terms of sex differences, men scored higher than women did on both DTDD-T and SD3-T Machiavellianism and psychopathy but not on narcissism for the DTDD-T, SD3-T, and SINS-T. These results were consistent with the parent measures (Table 1).

Construct validity was evaluated in the multi-trait multi-method matrix presented in Table 2. The DTDD-T showed acceptable convergent correlations for narcissism, Machiavellianism, and psychopathy with the established measures, ranging from 0.16 (DTDD-T Psychopathy – LSRP Secondary Psychopathy) to 0.56 (SD3-T Narcissism – NPI-16 narcissism). Generally, effect sizes were higher for narcissism, indicating more convergence there. Additionally, the adapted narcissism scales, and to a lesser extent also the psychopathy scales, showed good discriminant validity in terms of hetero-trait mono-/hetero-method correlations being smaller than mono-trait hetero-method correlations. However, the adapted Machiavellianism scales correlated higher with global and primary psychopathy (but not secondary psychopathy) than with other Machiavellianism scales. It should be noted, however, that this finding is indeed not uncommon, especially because Machiavellianism and psychopathy may be too similar to adequately distinguish with extant measures (Miller, Hyatt, Maples-Keller, Carter, & Lynam, in press). The SINS showed acceptable convergent validity coefficients (in the .4 s range). More importantly, however, the discriminant correlations were lower than the convergent ones.

We examined how the Turkish adaptations were associated with important correlates, the Big Five and general self-esteem. As can be seen in Table 2, relatively similar correlational patterns emerged between the DTDD-T and SD3-T, indicating they both shared a relatively similar nomological network. As expected, Machiavellianism and psychopathy (but not narcissism) were negatively correlated with Agreeableness, while narcissism and psychopathy (but not Machiavellianism) were positively correlated with Extraversion. Additionally, narcissism correlated positively with Openness in both adapted scales. Together, these findings reproduce correlational patterns between the Dark Triad and the Big Five that are (a) regularly found in other work (e.g., Jonason & Webster, 2010; Muris, Merckelbach, Otgaar, & Meijer, 2017; Paulhus & Williams, 2002) and (b) also found when looking at correlations between the established measures and the Big Five (see Table 2). We also found usually no significant correlations between Dark Triad scales and self-esteem, except for SD3-T Narcissism which is also consistent with literature (Jonason & Webster, 2010).

### 5. Discussion

We demonstrated that Short Dark Triad scales could be successfully adapted into Turkish. First, internal consistencies were satisfactory-to-good, rivaling those of the established measures. Only for DTDD-T psychopathy, Cronbach's alpha value was below 0.70, as it is composed of only four items and such it is likely to have comparatively low level of internal consistency (Schmitt, 1996). Second, the adapted versions showed good factorial validity, as judged by CFA fit; but the DTDD-T

**Table 1**  
Descriptive Statistics, internal consistency scores, and sex differences.

Variables	α	M (SD)			t	g
		Total	Men	Women		
<b>DTDD-T</b>						
Narcissism	0.80	2.82 (1.08)	2.86 (0.67)	2.83 (0.71)	0.30	0.04
Machiavellianism	0.81	1.93 (0.90)	2.11 (0.68)	1.82 (0.63)	2.97**	0.45
Psychopathy	0.67	2.01 (0.88)	2.23 (0.69)	1.88 (0.71)	3.72***	0.50
<b>SD3-T</b>						
Narcissism	0.79	3.16 (0.69)	3.18 (1.02)	3.15 (1.12)	0.43	0.03
Machiavellianism	0.70	3.27 (0.65)	3.38 (1.00)	3.20 (0.83)	2.57*	0.20
Psychopathy	0.79	2.30 (0.71)	2.41 (1.00)	2.23 (0.77)	2.28*	0.21
<b>SINS-T</b>						
		2.33 (1.60)	2.25 (1.70)	2.39 (1.55)	-0.79	-0.09
<b>Parent Dark Triad Measures</b>						
Narcissistic Personality Inventory (NPI-16)	0.71	6.24 (0.20)	6.34 (3.56)	6.11 (3.15)	0.62	0.08
Machiavellianism (Mach-IV)	0.76	2.90 (0.50)	2.99 (0.51)	2.84 (0.48)	2.68**	0.31
Psychopathy (LSRP)						
Global psychopathy	0.84	2.22 (0.45)	2.30 (0.45)	2.17 (0.45)	2.77**	0.29
Primary Psychopathy	0.82	2.06 (0.52)	2.20 (0.49)	1.98 (0.52)	4.05***	0.43
Secondary Psychopathy	0.68	2.47 (0.52)	2.46 (0.53)	2.47 (0.51)	-0.10	-0.02
<b>Big Five</b>						
Openness to Experience	0.81	3.54 (0.67)				
Conscientiousness	0.75	3.33 (0.65)				
Extraversion	0.84	3.39 (0.79)				
Agreeableness	0.70	3.79 (0.56)				
Neuroticism	0.75	3.24 (0.69)				
General self-esteem	0.83	3.65 (0.69)				

Note. N = 368. SD = Standard Deviation, α = Cronbach's α, g = Hedges' g.

\* p < 0.05.

\*\* p < 0.01.

\*\*\* p < 0.001.

fit was better than that of the SD3-T which may be a function of the greater content heterogeneity in the latter. Third, convergent and discriminant validity was sufficient for narcissism and psychopathy for both DTDD-T and SD3-T, though not for SD3-T Machiavellianism. In absolute sizes, the convergent correlations are similar to what is found in current literature (Jonason & Webster, 2010), though they would ideally be higher. This, however, reflects a unique problem of short scales: they tend to homogenize item content, thus usually increasing internal consistencies and decreasing content coverage. This can make short scales narrower and actually decrease associations with other, broader variables (i.e., bandwidth-fidelity trade-off). The specific lack of construct validity of Machiavellianism, we argue, is not particularly unique to the Turkish language or respondents, but may rather reflect a more deep-seated issue with how this construct is operationalized in extant

measures. However, we note that more and different correlations than the Big Five and self-esteem, such as empathy and emotional processing, would need to be examined to provide a better approximation of Machiavellianism's nomological network (Schimmenti, Jonason, Passanisi, La Marca, & Gervasi, in press). Nonetheless, other studies have had problems distinguishing Machiavellianism reliably from psychopathy (see Miller et al., in press). Lastly, the adapted scales showed similar correlations with the Big Five and global self-esteem, suggesting that they tap relatively similar nomological networks. Taken together, the DTDD-T, SD3-T, and SINS-T performed psychometrically as they should so that they can be used for further research in similar ways as the established measures. Of course, any problems with the established scales as well as the English original short version are also inherited by the Turkish adaptations.

**Table 2**  
Construct validity correlations.

Variables	SINS	DTDD-T			SD3-T			Standard Dark Triad Measures				
		N	M	P	N	M	P	N	M	Global P	PI	PII
<b>DTDD-T</b>												
Narcissism	<b>.49***</b>	-										
Machiavellianism	.48***	.37***	-									
Psychopathy	.34***	.31***	.50***	-								
<b>SD3-T</b>												
Narcissism (N)	<b>.40***</b>	<b>.48***</b>	-	-								
Machiavellianism (M)	.24***	.31***	<b>.47***</b>	-	.31***	-						
Psychopathy (P)	.39***	.32***	.50***	<b>.41***</b>	.27***	.39***	-					
<b>Parent Dark Triad Measures</b>												
NPI-16	<b>.49***</b>	<b>.42***</b>	.41***	.32***	<b>.56***</b>	.35***	.38***	-				
Mach-IV	.29***	.19***	<b>.40***</b>	.27***	.15***	<b>.37***</b>	.29***	.19***	-			
Psychopathy LSRP												
Global psychopathy	.33***	.28***	.47***	<b>.32***</b>	.22***	.39***	<b>.50***</b>	.29***	.39***	-		
Primary Psychopathy (PI)	.36***	.26***	.48***	<b>.36***</b>	.24***	.40***	<b>.48***</b>	.34***	.41***	-	-	
Secondary Psychopathy (PII)	.18***	.21***	.29***	<b>.16***</b>	.11*	.23***	<b>.36***</b>	.11*	.24***	-	-	-
<b>Big Five</b>												
Openness to Experience	.19***	.15**	.10	.12*	.35***	.15**	.01	.35***	.02	-.04	-.01	-.07
Conscientiousness	-.05	.08	-.11*	-.07	.16**	.07	-.09	.13*	-.10	-.13*	.04	-.22***
Extraversion	.18***	.22***	.08	.12*	.44***	.07	.13*	.38***	.08	.10	.12	.03
Agreeableness	-.27***	-.06	-.32***	-.30***	-.03	-.21***	-.41***	-.17**	-.27***	-.34***	-.35***	-.21***
Neuroticism	.09	.12*	.11*	.10	-.04	.08	.17**	-.01	.12*	.18***	.05	.33***
General Self-Esteem (GSE)	.04	.07	.01	.04	.11*	.06	-.10	-.10	-.10	-.04	.02	-.13*

Note. N = 368. Correlations in bold and gray-shaded represent convergent validity coefficients (mono-trait hetero-method);

\* p < .05, \*\* p < .01, \*\*\* p < .001.

### 5.1. Limitations and Conclusions.

Our study was characterized by a number of limitations. First, we did not examine retest-stability of scales or other forms or reliability as done previously (Jonason & Webster, 2010). Second, we also did not examine criterion validity where important/interesting outcome variables, such as aggression or conflicts, are predicted from the adapted scales (preferably over and above the standard scales for incremental, or at least with rivaling variance explanation for comparable predictive validity). Lastly, the adapted scales should also be used in substantive research to gauge how they perform in actual research contexts outside of psychometric validation studies.

This study contributes to the literature by providing the DTDD-T, SD3-T and SINS-T. So far, no short measures of the Dark Triad have been available in Turkish, thus hampering Dark Triad research in Turkey. We showed that our adaptations can be used in a Turkish context, proving useful in applied, basic, and cross-cultural research.

### Appendix A. Supplementary data

Supplementary data to this article can be found online at <http://dx.doi.org/10.1016/j.paid.2017.05.019>.

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