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This is the final, published version of an article published by Taylor and Francis in its final form on 11<sup>th</sup> March 2022 at <https://doi.org/10.1080/13674676.2022.2029380>

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Accepted for publication in *Mental Health Religion and Culture*

Introducing the Shorter Dark Tetrad for Muslim Societies (SD4-MS):

A study among young adults in Pakistan

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**Abstract**

This paper examines the psychometric properties of the Short Dark Tetrad, presented for online administration, among a sample of 370 young adults between the ages of 18 and 26 who were born in the Punjab and who had lived there since their birth. With the omission of one item from each of the four scales (Machiavellianism, psychopathy, narcissism, and sadism) the clear four factor structure was recovered with cross-loadings remaining on four items. All four scales recorded acceptable or good levels of internal consistency reliability (alpha). This Shorter Dark Tetrad (SD4-MS) is commended for further use within predominantly Muslim societies.

*Keywords:* narcissism, psychopathy, sadism, Machiavellianism, psychometric, Muslim

### Introduction

The classic paper by Paulhus and Williams (2002) in *Journal of Research in Personality* firmly launched into psychology the notion of the dark triad of offensive yet non-pathological personalities: Machiavellianism, subclinical narcissism, and subclinical psychopathy. Each of these three constructs had already established a significant literature and had been operationalised by measures for clinical and for research purposes. The study by Paulhus and Williams (2002) was important because it established grounds for asserting that these three dark personalities were distinct but overlapping constructs. The construct validity for this assertion was that in their operationalised form these three dark personalities functioned somewhat differently within the psychological space defined by the Big Five Factor model of personality. Narcissism, assessed by A Narcissistic Personality Inventory (NPI; Raskin & Hall, 1979) was positively correlated with extraversion (.42) and openness (.38) and negatively correlated with agreeableness (-.36), but independent of conscientiousness and neuroticism. Machiavellianism, assessed by The Mach-IV Inventory (Christie & Geis, 1970) was negatively correlated with both agreeableness (-.47) and conscientiousness (-.34), but independent of extraversion, neuroticism, and openness. Psychopathy, assessed by the Self-Report Psychopathy Scales (SRP-III; Hare, 1985) was positively correlated with extraversion (.34) and openness (.24), and negatively correlated with agreeableness (-.25), conscientiousness (-.24), and neuroticism (-.34).

Within a decade of the paper by Paulhus and Williams (2002), the dark triad of offensive yet non-pathological personalities had become well established within psychological literature (for review see Furnham, Richards, & Paulhus, 2013). Research was, however, hampered by the length of the instruments designed to assess these constructs. This practical problem led quite quickly to the development of two instruments designed to capture the essence of these three dark personalities: a 12-item instrument proposed by

Jonason and Webster (2010), known as ‘The Dirty Dozen’ with four items assessing each construct; and a 27-item instrument proposed by Jones and Paulhus (2014), known as the ‘Short Dark Triad (SD3)’ with nine items assessing each construct.

The Dirty Dozen quickly attracted attention and was incorporated within a range of studies. For example, Aghababaei, Mohammadtabar, and Saffarinia (2014) explored the connection between the dark triad and honesty-humility in prosociality, religiosity, and happiness. Egan, Chan, and Shorter (2014) explored the connection between the dark triad and happiness and subjective wellbeing. Haddad, Angman, Archer, and Garcia (2016) explored the connections between the dark triad and sociosexual orientation and religious affiliation. Ghoibani, Watson, Zarei, and Chen (2017) explored the connection between the dark triad and harmony control. Lowichi and Zajenkowski (2017) explored the relationship between the dark triad and religiosity and empathy. Schimmenti et al (2019) explored the connection between the dark triad and empathy and alexithymia. The Dirty Dozen has also been translated into various languages, including, Bangla (Ahmed, Naher, Islam, Akter, & Deb, 2020), Italian (Chiorri, Garofalo, & Velotti, 2019), Portugese (Pechorro et al, 2021), Spanish (Pineda, Sandín, & Muris, 2020) and Turkish (Özsoy, Rauthmann, Jonason, & Ardiç, 2017). A number of commentators, however, have questioned the wisdom of trying to capture these three distinctive dark personalities in just four items, demonstrating that these short scales do not correspond well with longer and established measures of the three diverse constructs (Lee et al., 2013; Maples et al., 2014; Miller et al., 2012). According to Jonason et al. (2013), the Dirty Dozen represents a trade-off of accuracy for efficiency.

Responding to the challenge that the Dirty Dozen failed to offer an adequate short form of the dark triad, Jones and Paulhus (2014) reported on a project that first tried to clarify the conceptualisation of the three constructs of Machiavellianism, subclinical Narcissism, and subclinical psychopathy by sharpening the differentiation among these three constructs and

then tried to operationalise these conceptualisations with sets of nine items each.

Distinguishing Machiavellianism from subclinical Psychopathy, Jones and Paulhus (2014) argue that Machiavellians plan ahead, build alliances, and do their best to maintain their positive reputation, while psychopaths behave impulsively, abandon friends and family, and give little heed to their reputation (Hare & Neumann, 2008). Machiavellians tend to be strategic rather than impulsive (Jones & Paulhus, 2011a), and they tend to avoid manipulating family members (Barber, 1998). Psychopaths tend to lie for immediate rewards, even if those lies compromise their long-term interest (Paulhus & Jones, 2017). Their callous manipulation, combined with recklessness and thrill-seeking, tends to be reflected in bold and relentless pursuit of self-interest (Hare & Newmann, 2008).

For their understanding of subclinical Narcissism, Jones and Paulhus (2011b, 2014) drew on Kernberg (1975) and Kohut (1978). They argued that:

narcissistic behaviour was marked by manipulation and callousness, much like Machiavellianism and psychopathy. Intrapsychically, however, narcissism was defined by a clash between a grandiose identity and underlying insecurities. (Jones & Paulhus, 2014, p. 29)

Narcissistic individuals are endlessly seeking ego-reinforcement (Morf & Rhodewalt, 2001) that can lead to self-destructive behaviours (Vazire & Funder, 2006). Narcissistic grandiosity promotes a sense of entitlement (Bushman, Bonacci, van Dijk, & Baumeister, 2003) which may result in aggression if that grandiosity is threatened (Bushman & Baumeister, 1998; Jones & Paulhus, 2010). Narcissism involves self-deception: belief in their boastful claims tend to be maintained even when it can be verified that they exaggerate their competence (Paulhus & Williams, 2002).

Drawing on this sharpened differentiation between Machiavellianism, subclinical Narcissism, and subclinical Psychopathy, Jones and Paulhus (2014) developed a pool of 41

items in which: the Machiavellianism items comprised four themes (cynicism, coalition building, planning, and reputation); the subclinical Narcissism items comprised four themes (entitlement, exhibitionism, grandiosity, and leadership); and the subclinical Psychopathy items comprised four themes (antisocial behaviour, callous affect, erratic lifestyle, and short-term manipulation). Drawing on data provided by 489 adults, Jones and Paulhus (2014) employed exploratory factor analysis and exploratory structural equation modelling to identify three sets of nine items each that distinguished between the three constructs embraced by the Dark Triad.

The short Dark Triad also quickly attracted attention and was incorporated within a range of studies. For example, various studies have explored the connection between the short dark triad and depression and life satisfaction (Bonfá-Araujo et al, 2021), honesty rules in romantic relationships (Muñoz & De Los Reyes, 2021), perceptions of stalking (Chung & Sheriden, 2021), problem gambling (Onyedire, et al, 2021), social media addiction (Chung, Morshidi, Yoong, & Thian, 2019), and willingness to share (Malesza & Kalinowski, 2021). Like the Dirty Dozen, the short Dark Triad has been translated into various languages, including, Chinese (Zhang, Ziegler, & Paulhus, 2020), German (Malesza et al, 2019), Italian (Somma, et al, 2020), Polish (Rogoza & Ciecuch, 2019), Spanish (Pineda, Sandín, & Muris, 2020), and Turkish (Özsoy, Rauthmann, Jonason, & Ardiç, 2017).

In principle the Short Dark Triad has two advantages over the Dirty Dozen. The items have been selected on the basis of theory that proposes four themes within each construct and each theme is represented by at least one item in the relevant scale. Each construct is represented by nine items rather than four. Comparing the two measures, Maples, Lamkin, and Miller (2014) concluded that the longer scales of the Short Dark Triad yield data that are more consistent with the three constructs as assessed by more established and validated measures. There is a third way in which these two measures differ. All items in the Dirty

Dozen are scored in the same direction. In the Short Dark Triad five items are reverse coded, three in the scale of subclinical narcissism and two in the scale of subclinical psychopathy.

The inclusion of reverse coded items was routinely commended by classic texts in psychological testing and measurement of personality traits to guard against response style bias (Anastasi, 1961; Edwards, 1970). More recently, however, employing reversed items has been identified as a questionable practice suggesting that the unidimensionality of the test may be jeopardised by secondary sources of variance (Suárez-Alvarez et al., 2018). Also, reverse coded items may cause a problem within some cultural contexts as evidenced by Astley, Francis, and Robbins (2012), Musharraf and Lewis (2016), Francis, Tekke, and Robbins (2016), and Erken and Francis (2021) within Muslim societies.

### **From triad to tetrad**

With the publication of ‘The Short Dark Tetrad (SD4)’, Paulhus, Buckels, Trapnell, and Jones (2021) not only expanded their original family of three offensive yet non-pathological personalities, with a fourth compatriot, sadism, they also renounced the collection of items designed to assess Machiavellianism, subclinical narcissism, and subclinical psychopathy. Each of these two developments will be explored in turn.

From among a range of potentially related constructs, including spitefulness, borderline antagonism, moral disengagement, schadenfreude, and status-driven risk-taking, Paulhus et al. (2021) argued that they invited sadism into their dark tetrad on the grounds that this construct met two conditions. First, sadism shared with Machiavellianism, subclinical narcissism, and subclinical psychopathy the shared component of callousness or impaired empathy. Second, sadism added a unique element not shared with the three members of the dark triad, namely intrinsic pleasure in hurting others (Nell, 2006) or enjoyment in other people’s suffering (Paulhus & Dutton, 2016).



In developing their distinctive measure of sadism for incorporation within the dark triad, Paulhus et al. (2021) began by reviewing existing measures of the construct, including the Short Sadistic Impulse Scale (SSIS; O'Meara, Davies, & Hammond, 2011), the Varieties of Sadistic Tendencies (VAST; Paulhus & Jones, 2015), and the Assessment of Sadistic Personality (ASP; Ploufee et al., 2017). Then they refined, sharpened, and shaped the construct of sadism within the environment of the family of the four dark personalities by emphasising the unique contribution of each construct and by minimising the overlap among the constructs.

It was this challenge to minimise the overlap among the constructs, read in light of some of the critique of the Short Dark Triad (Furnham, Richards, Rangel, & Jones, 2014; Zeigler-Hill & Marcus, 2019), that also caused Paulhus et al. (2021) to renounce their conceptualisation of the other three dark constructs, especially Machiavellianism. Another crucial change that occurred as part of this process was the elimination of all reverse coded items.

Part of the strategy employed by Paulhus et al. (2021) to demonstrate the construct validity of the relative independence of the four measures was to examine their individual relation with each of the big five factors of personality as proposed by Costa and McCrae (1992). They reported that extraversion was positively correlated with narcissism and with psychopathy; agreeableness was negatively correlated with Machiavellianism, psychopathy and sadism; conscientiousness was negatively correlated with Machiavellianism, psychopathy, and sadism; neuroticism was negatively correlated with narcissism; and openness was positively correlated with narcissism.

Furnham and Horne (2021) confirmed the factor structure of the Short Dark Triad among a sample of 502 participants in the United States and reported the following alpha coefficients: Machievellianism,  $\alpha = .65$ ; Narcissism,  $\alpha = .81$ ; Psychopathy,  $\alpha = .79$ ; Sadism,  $\alpha$

= .79. They reported significantly higher scores for males on all four measures. The construct validity of the German translation of the Short Dark Tetrad was tested by Blötner et al (2021) alongside the big five factors of personality, honesty-humility, maladaptive personality traits, impulsivity, aggression, motives, values, and sociosexual orientation.

### **Research problems**

Against this background the aim of the present study was to explore the performance of the Short Dark Tetrad (SD4) within a predominantly Muslim society. Given the elimination of reverse coded items from this recently developed instrument it was hypothesised that the four factor structure would be recovered, although it was also recognised that not all of the 28 items may transfer comfortably within this specific social context.

## **Method**

### **Procedure**

The Short Dark Tetrad was included within the online survey *Parental Attachment and Life* designed for completion by young adults between the ages of 18 and 26 who were born in Punjab and had lived there since their birth. Participants were assured of confidentiality. The project was approved by the Research Ethics Committee of the Advanced Studies Research Board GC University Lahore.

### **Instrument**

The 28-item Short Dark Tetrad (SD4; Paulhus, Buckels, Trapnell, & Jones, 2021) proposes four 7-item measures of Machiavellianism, subclinical narcissism, subclinical psychopathy, and sadism (see table 1 for the items). Participants were invited to rate their 'degree of agreement with each item on a 5-point scale': strongly disagree (1), disagree (2), neutral (3), agree (4), and strongly agree (5). There are no reverse coded items in this instrument.

## Participants

The *Parental Attachment and Life* survey was fully completed by 370 participants who met the profile of young adults between the ages of 18 and 26 who were born in Punjab and had lived there since their birth. The participants comprised 151 males, 217 females, and 2 who preferred not to say: 45 were aged 18 or 19, 131 were aged 20 or 21, 116 were aged 22 or 23, 65 were aged 24, 25, or 26, and 13 preferred not to say.

## Analysis

The data were analysed by SPSS using the frequency, correlation, factor, and reliability routines.

## Results and discussion

- insert table 1 about here -

The first step in data analysis employed confirmatory factor analysis to explore the structure of the 28 items proposed by the SD4. The varimax rotated solution from principle components analysis, constrained to four factors, produced a fairly clean solution after the removal of one item from each of the four hypothesised factors. The causalities in this analysis were the following four items:

- I know how to hurt someone with words alone (sadism)
- I like to show off every now and then (narcissism)
- People who mess with me always regret it (psychopathy)
- Flattery is a good way to get people on your side (Machiavellianism)

With these four items eliminated, table 1 demonstrates strong cross-loadings on just four items. The item 'I love it when a tricky plan succeeds' from the Machiavellianism scale cross-loaded on narcissism (.32). The item 'Watching a fist-fight excites me' from the sadism scale cross-loaded with psychopathy (.30). Two items from the psychopathy scale cross-

loaded on sadism: 'I've been in more fights than most people of my age and gender' (.34), and 'I've been in trouble with the law' (.39).

- insert tables 2 and 3 about here-

The second step in data analysis employed the alpha coefficient (Cronbach, 1951) and the correlations between individual items and the sum of the other five items within each of the proposed scales to explore the internal consistency reliability of these measures of four dark personalities. The alpha coefficients presented in table 3 demonstrate good reliability characteristics for the measures of sadism (.81), subclinical narcissism (.81), and subclinical psychopathy (.79), but less strong reliability for the measure of Machiavellianism (.66).

These differences are also reflected by the correlations between individual items and the sum of the other two items, presented in table 2. These correlations range between .48 and .65 for sadism, between .54 and .61 for narcissism, and between .47 and .58 for psychopathy, but drop to between .33 and .43 for Machiavellianism. The poorer performance of Machiavellianism was also reported by Paulhus et al. (2021) in their foundation paper: Machiavellianism (.78), compared with sadism (.82), psychopathy (.82), and narcissism (.83), although in this case the difference was not so pronounced.

The third step in data analysis compared the main scale scores recorded on each of the four dark personalities by males and by females. The data presented in table 3 demonstrates that males recorded significantly higher scores than females on sadism and on psychopathy, although there were no significant sex differences on narcissism or Machiavellianism. In their exploration of sex differences on the SD4, Neumann, Jones, and Paulhus (2021) reported significantly higher scores by males on all four scales, but with the strongest sex differences in respect of sadism and psychopathy.

- insert table 4 about here -

The fourth step in data analysis explored the bivariate correlations between Machiavellianism, subclinical narcissism, subclinical psychopathy, and sadism. The data presented in table 4 indicate that the strongest association is between sadism and subclinical psychopathy. This is consistent with the findings reported by Paulhus et al. (2021).

### **Conclusion**

This study set out to explore the performance of the Short Dark Tetrad (SD4) within a predominantly Muslim society, against the background of two hypotheses. The first hypothesis suggested that elimination of the negative items formerly present in the Short Dark Triad (SD3) would make this instrument a successful transfer for use within Muslim societies. The second hypothesis suggested that, nonetheless, there may be dark items within this newer instrument that could be detrimental to a successful transfer within Muslim societies. These two hypotheses were tested first by confirmatory factor analysis and then by reliability analyses.

The data indicated that, with the removal of one item from each of the four scales of dark personalities, the four-factor structure was recovered with some cross-loadings remaining on four items. The alpha coefficients for three of the scales (subclinical narcissism, subclinical psychopathy, and sadism) were good (in excess of .80). The alpha coefficient for Machiavellianism was, however, less strong, but acceptable for a six-item scale ( $\alpha = .66$ ). On these grounds the Shorter Dark Tetrad for Muslim Societies (SD4-MS) can be commended for further use.

As an initial study, there are clear limitations imposed on the generalisability of the findings, restricted to a sample of young adults in Punjab. The findings, however, are of sufficient worth to command replication and extension studies within other age groups within Punjab, and within other predominantly Muslim societies.

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Table 1

*The Shorter Dark Tetrad: Factor structure*

	Factor loadings			
	1	2	3	4
<i>Sadism</i>				
Watching a fist-fight excites me	.64		.30	
I really enjoy violent films and video games	.76			
It's funny when idiots fall flat on their face	.65			
I enjoy watching violent sports	.76			
Some people deserve to suffer	.58			
Just for kicks, I've said mean things on social media	.62			
<i>Narcissism</i>				
People see me as a natural leader		.69		
I have a unique talent for persuading people		.67		
Group activities tend to be dull without me		.72		
I know that I am special because people keep telling me so		.72		
I have some exceptional qualities		.68		
I'm likely to become a future star in some area		.65		
<i>Psychopathy</i>				
People often say I'm out of control			.68	
I tend to fight against authorities and their rules			.66	
I've been in more fights than most people of my age and gender	.34		.66	
I tend to dive in, then ask questions later			.65	
I've been in trouble with the law	.39		.56	
I sometimes get into dangerous situations			.66	
<i>Machiavellianism</i>				
It's not wise to let people know your secrets				.53
Whatever it takes, you must get the important people on your side				.60
Avoid direct conflict with others because they may be useful in the future				.55
Keep a low profile if you want to get your way				.66
Manipulating the situation takes planning				.61
I love it when a tricky plan succeeds		.32		.57

Note: All loadings below .30 have been suppressed

Table 2

*The Shorter Dark Tetrad: Item correlations*

	<i>r</i>
<i>Sadism</i>	
Watching a fist-fight excites me	.58
I really enjoy violent films and video games	.63
It's funny when idiots fall flat on their face	.54
I enjoy watching violent sports	.65
Some people deserve to suffer	.48
Just for kicks, I've said mean things on social media	.56
<i>Narcissism</i>	
People see me as a natural leader	.54
I have a unique talent for persuading people	.58
Group activities tend to be dull without me	.59
I know that I am special because people keep telling me so	.61
I have some exceptional qualities	.57
I'm likely to become a future star in some area	.54
<i>Psychopathy</i>	
People often say I'm out of control	.53
I tend to fight against authorities and their rules	.56
I've been in more fights than most people of my age and gender	.58
I tend to dive in, then ask questions later	.47
I've been in trouble with the law	.56
I sometimes get into dangerous situations	.55
<i>Machiavellianism</i>	
It's not wise to let people know your secrets	.33
Whatever it takes, you must get the important people on your side	.42
Avoid direct conflict with others because they may be useful in the future	.35
Keep a low profile if you want to get your way	.39
Manipulating the situation takes planning	.40
I love it when a tricky plan succeeds	.43

Note:  $r$  = correlation between individual item and the sum of the other five items

Table 3

*The Shorter Dark Tetrad: Mean scale scores by sex*

	$\alpha$	Male		Female		$t$	$p <$
		Mean	SD	Mean	SD		
Sadism	.81	18.32	4.89	15.38	5.17	5.50	.001
Narcissism	.81	20.08	4.71	19.54	4.90	1.06	NS
Psychopathy	.79	18.65	4.80	16.74	4.98	3.68	.001
Machiavellianism	.66	20.89	4.18	21.13	3.92	0.55	NS



Table 4

*Correlation matrix*

	Sadism	Psych	Narci
Machiavellianism	.07	.08	.35***
Narcissism	.26***	.34***	
Psychopathy	.57***		

Note: \*\*\*  $p < .001$