Open Access **Research Article**

Dark Side subscales and Work Success

Adrian Furnham

Department of Leadership and Organizational Behaviour, Norwegian Business School (BI), Olso, Norway.

Corresponding Author: Adrian Furnham, Department of Leadership and Organizational Behaviour, Norwegian Business School (BI), Olso, Norway.

Abstract

Various studies have revealed the paradoxical finding that some dark-side traits are positively associated with management and leadership success. This study aimed to investigate the relationship between the newly developed subscales of dark-side trait traits as measured by the Hogan Development Survey (HDS) and criteria-keyed personality test measures of work success. In all, 262 British employees participated in the study. In the study we examined the facets of the three super-factors: Moving away from, Against and Towards other, on at a time onto the six criterion variables: service orientation, stress tolerance, reliability, clerical potential, sales potential and managerial potential. Mercurial and moody behaviours were negative predictors, whereas fantasied talent and public confidence were positive predictors of six measures of work success. The results suggest that a finer-grain analysis of dark-side traits which is made possible by the updated Hogan Development Survey offers an opportunity to understand the paradox mentioned above. Implications and limitations are acknowledged.

Keywords: dark side; HDS; professions; disorders; facets; work success; psychometricians; dark triad; narcissism; Machiavellianism; psychopathy

Introduction

Dark subscales and work success

There is now an extensive literature on dark-side traits in the workplace [4,11,12,18-22,26,30,33,39,44].

Various studies show that, perhaps paradoxically, some dark traits like Narcissistic Personality Disorder have a positive effect on leadership emergence if not effectiveness [35]. Indeed, reviews using data from three different countries have shown that Chief Executive Officers often have elevated scores on numerous dark-side measures [19,37,43]. Furnham, Richards and Paulhus (2013) also showed that the "dark triad" (Narcissism, Machiavellianism and Psychopathy) in sub-clinical levels appear in many successful leaders.

This a small, but growing literature, on the paradoxical finding from many studies that sometimes show dark-side traits are associated with work success as well as failure [8,14,15,30]. A part explanation for these findings is the way sub-clinical personality disorder tests, like the HDS, are valenced and worded. Others think that some of these dark traits (e.g. Narcissism) are initially very useful at getting a job (i.e. leadership

emergence) but that they are associated with long term management derailment and failure. Based on their data, Kaiser et al. (2015) proposed that both lower and higher HDS scores represent increasing risk for derailing behaviours, whereas moderate scores represent low risk and may even be associated with desirable behaviours. There are also distinctions within disorders such as the different between grandiose and vulnerable narcissism which may be differentially related to work-related behaviours. A more detailed examination of the facets of the dark-side traits may indeed offer an insight into this paradox.

In this study, we used the updated Hogan Development Survey (HDS) which now has three facets for each disorder. The HDS assesses dysfunctional interpersonal themes which reflect distorted beliefs about others. These emerge when people encounter stress or stop considering how their actions affect others (Hogan & Hogan, 2001; 2009). Over time, these dispositions may become associated with a person's reputation and can impede job performance and career success. The HDS assesses self-defeating expressions of normal personality. The HDS has increasingly attracted the attention particularly by Industrial/Organisational psychology researchers interested in management derailment [16,18].

Higher order factors	HDS	Subscales	Definitions
Moving Away	Excitable	Volatile	Moody, often angered or annoyed easily upset and hard to soothe.
		Easily Disappointed	Initial passion for people and projects, who inevitably disappoint, and passion then turns to rejection.
		No Direction	Lacking few well defined beliefs or interests, but with regrets about past behaviour.
	Sceptical	Cynical	Prone to doubt others' intentions and assume they have bad ulterior motives.
		Mistrusting	Generalized mistrust of people and institutions; being alert for signs of perceived mistreatment.
		Grudges	Holding grudges and being unwilling to forgive real or perceived wrongs.
	Cautious	Avoidant	Avoiding new people and situations to avoid imagined potential embarrassment.
		Fearful	Afraid of being criticized for making mistakes and being reluctant to act independently or make decisions.
		Unassertive	Unwilling to act assertively and therefore prone to being overlooked or ignored.
	Reserved	Introverted	Valuing one's private time and preferring to work alone.
		Unsocial	Keeping others at a distance, limiting close relationships, and being generally detached.
		Tough	Indifferent to the feelings and problems of others, focused on tasks rather than people.
	Leisurely	Passive Aggressive	Overtly pleasant and compliant but privately resentful and subversive regarding requests for improved performance.
		Unappreciated	Believing that one's talents and contributions are ignored; perceiving inequities in assigned workloads.
		Irritated	Privately but easily irritated by interruptions, requests, or work related suggestions.
Moving Against	Bold	Entitled	Feeling that one has special gifts and accomplishments and, consequently, deserves special treatment.
		Overconfidence	Unusually confident in one's abilities; belief that one will succeed at anything one chooses to undertake.
		Fantasized Talent	Believing that one has unusual talents and gifts and that one has been born for greatness.
	Mischievous	Risky	Prone to taking risks and testing limits; deliberately bending or breaking inconvenient rules.
		Impulsive	Tending to act impulsively without considering the long term consequences of one's actions.
		Manipulative	Machiavellian tendencies-using charm to manipulate others and no remorse about doing so.
	Colourful	Public Confidence	Expecting others to find one's public performances fascinating and not knowing when to be quiet.
		Distractible	Easily distracted, minimal focus, needing constant stimulation, confusing activity with productivity.
		Self-Display	Wanting to be the centre of attention and using dramatic costumes and gestures to attract attention to oneself.
	Imaginative	Eccentric	Expressing unusual views that can be either creative or merely strange; tendency to be absorbed in these ideas.
		Special Sensitivity	Believing that one has special abilities to see things others don't and understand things others can't.
		Creative Thinking	Believing that one is unusually creative; easily bored and confident in one's imaginative problem solving ability.
Moving Towards	Diligent	Standards	Having exceptionally high standards of performance for oneself and others.
		Perfectionistic	Perfectionistic about the quality of work products and obsessed with the details of their completion.
		Organized	Meticulous and inflexible about schedules, timing, and rules and procedures.
	Dutiful	Indecisive	Overly reliant on others for advice and reluctant to make decisions or act independently.
		Ingratiating	Excessively eager to please one's superiors, telling them what they want to hear, and never contradicting them.

		Conforming	Taking pride in supporting one's superiors and following their orders regardless of one's personal opinion.

Table 1: *The new structure of updated version of HDS.*

As presented in Table 1, and confirmed in various studies [16], the HDS has three higher order factors that was based on Horney's model (1950). The three higher order factors (Moving Away, against and Towards Others) have similarities with the Clusters A (i.e., Odd/Eccentric), Cluster B (i.e., Dramatic/Emotional/Erratic) and Cluster C (i.e., Anxious/Fearful) as defined in various DMS manuals including DSM-IV-R (APA, 2000).

The HDS measures dark-side traits at the domain level, yet many trait measures have developed tests which measure at the domain *and* facet level to aid better interpretation [7]. The first aim of this study is to validate the updated subscale factor structure of the HDS. To our knowledge this is the first study investigating the updated facet-level HDS.

Work Success

There is an extensive literature, recently reviewed by Furnham (2018a), on personality and work success. There are numerous definitions and measures of work success and operationalized by both objective and subjective career criteria. Objective success refers to extrinsic indicators of success, which can be evaluated objectively by others, such as annual income and number of promotions, as well as salient performance criteria (i.e., revenue from sales). Subjective, or intrinsic, measures of career success attempt to capture an individual's personal judgments about their career achievements and typically include self-report measures such as job or career satisfaction. The two are moderately related. Nearly all researchers note the desirability of an aggregated measure of objective performance at work but note how difficult this is to obtain, as few organisations record this data.

There are however other measures such as that used in this study [11,17] which are *criterion-keyed* personality measures. This approach goes back over 50 years where personality researchers determine which personality test questions are reliable and valid indicators of performance and success in various jobs or relating to various job outcomes [10,11]. They are clearly not as robust or valid as objective measures.

In this study we used the HPI which has six established occupational scales: service orientation (i.e., being attentive, pleasant and courteous to clients and customers), stress tolerance (i.e., being able to handle stress – low scores are associated with absenteeism and health problems), reliability (i.e., high scores correspond to integrity and low scores to organisational delinquency), clerical potential (i.e., the ability to follow directions, pay attention to details and communicate clearly), sales potential (i.e., energy, social skills, and the ability to solve problems for clients) and managerial potential (i.e., leadership ability, planning and decision making skills). These measures have been used as "dependent variables" in various studies [11,13,16].

This study extends the work of Furnham, Trickey and Hyde (2012). Using the HDS scale scores and the HPI criterion-based measures of occupational success, that study showed that whilst some disorders seemed consistently associated with low success and potential ratings, others seemed either neutral or positively associated. Specifically, Moody, Mercurial, Excitable personalities are a challenge to work with,

and consequently had a strong negative association with all six occupational measures. The same result applied to Cautious people who are likely to be distrustful, suspicious, and cynical; and Avoidant types whose inhibition and risk-aversion preferences often prove problematic. However, there is evidence that Bold and Imaginative profiles are associated with success at work.

Based on Furnham et al.'s (2012) findings, we hypothesised firstly, that the subscales corresponding to Moving Away from Others (i.e., Excitable, Sceptical, Cautious, Reserved and Leisurely) will be negative correlates; and secondly that the subscales corresponding to Moving Against (Bold, Mischievous, Colourful, Imaginative), as well as Towards others (Diligent, Dutiful) will be positive correlates of work success. Third, based on previous research it was predicted that of the six work success criteria the dark-side domains and facet would be clearly related to stress tolerance, reliability and sales potential [11,13].

Methods

Participants and Procedure

In total 262 British employees took part in this study of which 102 (38.9%) were females. Their mean age was 42.94 years (*SD* = 9.45) with the range being between 16 to 71 years. In all 68% were between 30 and 50 years old. The data for this study came from a British consultancy company which runs assessment and development centres for big organisations. The data used in this study was obtained from mainly international organisations who agreed to let the anonymised data be used for this analysis. All participants received detailed, expert feedback on their scores. Ethical approval was sought and received for this study.

Materials

1. The Hogan Development Survey (HDS) [23] is a self-administered questionnaire 168 items that are dichotomous (*true-false*). HDS norms include data from over 109,000 working adults and job applicants from a variety of organizations. These data include supervisory and non-supervisory personnel and strikes a balance between selection and development cases. Descriptive statistics for HDS scales appear by gender, age, and race/ethnicity in the HDS Manual [27]. Alpha reliabilities for the scales are shown in Table 2 and short-term test-retest reliabilities, range from .64 to .75 [27].

2. The Hogan Personality Inventory (HPI) is one of the most recognized and used measurements in the U.S.A and in U.K [25]. It is a 206-item measurement that was designed based on the Five Factor Model [31]. The six work success criterion-keyed scales are derived from this measure. The manual notes that the HPI occupational scales predict a person's competency to perform in six general occupational roles. The scales are based on research comparing high and low performers based on large data sets. The scales assess qualities that distinguished the high-rated performers from the low-rated performers

Results

Descriptive statistics

HDS scales	HDS subscales	Mean	Std. Dev	Cronbach's Alpha
Excitable	Volatile	1.48	1.28	0.49 (.78)
	Easily Disappointed	1.25	1.32	
	No Direction	1.07	1.14	
Sceptical	Cynical	1.57	1.17	0.61 (.76)
	Mistrusting	0.87	1.08	
	Grudges	1.94	1.51	
Cautious	Avoidant	1.03	0.97	0.59 (.73)
	Fearful	0.91	1.19	
	Unassertive	2.26	1.42	
Reserved	Introverted	1.49	1.04	0.66 (.66)
	Unsocial	1.88	1.63	
	Tough	1.46	1.27	
Leisurely	Passive-Aggressive	2.03	1.27	0.45 (.58)
	Unappreciated	1.13	1.13	
	Irritated	1.05	1.10	
Bold	Entitled	2.31	1.27	0.64 (.69)
	Overconfidence	1.72	1.28	
	Fantasized Talent	3.53	1.28	
Mischievous	Risky	2.86	1.43	0.62 (.59)
	Impulsive	1.99	1.27	
	Manipulative	2.32	1.15	
Colourful	Public Confidence	2.58	1.54	0.54 (.72)
	Distractible	2.36	0.94	
	Self-Display	2.15	1.35	
Imaginative	Eccentric	1.14	1.22	0.62 (.64)
	Special Sensitivity	3.57	1.33	
	Creative Thinking	2.87	1.53	
Diligent	Standards	3.70	0.89	0.62 (.65)
	Perfectionistic	3.03	1.40	
	Organized	2.71	1.37	
Dutiful	Indecisive	2.10	1.15	0.46 (.50)
	Ingratiating	2.65	1.33	
	Conforming	2.86	1.21	

The Alpha in brackets refers to the Alpha shown in the Hogan and Hogan (2009) manual based on the results from 1532 men and 322 women.

Table 2: *Descriptive statistics and Cronbach's alpha of the updated version of HDS*

In Table 2, descriptive statistics and Cronbach's alpha values are presented. More recent research supports a "cut-off" point of .60 (Nagpal, Kumar, Kakar & Bhartia, 2010). As presented in Table 2, the range of Cronbach's alpha is from 0.45 to 0.66. In theory, these values indicate a low reliability. However, Cortina (1993) proposed that if a scale has a few items (2-3) then it is reasonable and acceptable to have a lower "cut-off" point. Moreover, studies have shown that values between .50 and .70 indicate a good fit [1,40].

Table 2 also shows the alpha reliabilities of the original HDS that does not have facet scores. With only one exception (namely for Colourful) the alphas are higher for the original version though the differences for half of them are not great (i.e. less than 0.5). The greatest disparities are for Excitable and Colourful. Those psychometricians who advise the strict 0.70 guideline for acceptable alphas will note that neither version of the HDS fulfills that criterion very well.

Multiple regression analysis

A series of hierarchical multiple regressions were then conducted using as the criterion variables the six occupational scales from HPI (i.e., service orientation, stress tolerance, reliability, clerical potential, sales potential and managerial potential) and as predictor variables the subscales that correspond to each higher order factor. In all regressions, demographics (i.e., age and gender) entered first and then the HDS subscales. This replicated Furnham et al. (2012) and Furnham (2018).

	Service Orientation		Stress Tolerance		Reliability		Clerical		Sales		Manager	
Step 1	$F_{(2,259)} = 3.66$		$F_{(2,259)} = 0.1$		$F_{(2,259)} = 0.05$		$F_{(2,259)} = 0.66$		$F_{(2,259)} = 0.14$		$F_{(2,259)} = 0.62$	
	R2 adj = .02		R2 adj = 0.001		R2 adj = 0.001		R2 adj = 0.001		R2 adj = 0.001		R2 adj = 0.001	
Step 2	$F_{(17,244)} = 11$		$F_{(17,244)} = 18.99$		$F_{(17,244)} = 4.17$		$F_{(17,244)} = 9.51$		$F_{(17,244)} = 11.86$		$F_{(17,244)} = 7.29$	
	R2 adj = 0.39		R2 adj = 0.54		R2 adj = 0.17		R2 adj = 0.36		R2 adj = 0.41		R2 adj = 0.29	
	β	t	β	t	β	t	β	t	β	t	β	t
Age (Step 1)	-0.02	-1.22	0.01	0.27	-0.07	-0.32	0.04	0.22	-0.02	-0.42	0.03	1.01
Gender (Step 1)	0.74	**2.36***	-0.17	-0.34	-0.04	-0.01	-0.41	-1.12	-0.35	-0.34	-0.21	-0.44
Volatile	-0.74	**-6.33***	-0.86	**-5.38***	-0.26	-1.54	-0.42	**-3.01***	-0.33	-0.88	-0.16	0.86
Eas. Disap.	-0.09	-0.69	-0.24	-1.28	-0.25	-1.26	-0.25	-1.50	0.34	**2.01***	0.01	0.06
No Direction	-0.29	**-2.34***	-0.73	**-4.31***	0.06	0.36	-0.24	-1.62	-0.007	-0.20	-0.80	**-4.01***
Cynical	-0.24	-1.82	-0.34	-1.94	-0.32	-1.74	-0.13	0.39	0.004	0.01	-0.17	-0.81
Mistrusting	-0.3	-0.22	-0.16	**-0.73**	-0.37	-1.65	-0.1	0.60	0.09	0.18	-0.1	-0.39
Grudges	-0.21	**-2.24***	-0.14	-1.07	-0.07	-0.54	-0.23	**-1.99***	-0.33	-1.07	-0.22	-1.41
Avoidant	-0.3	-1.80	-0.35	-1.52	0.37	1.55	-0.56	**-2.84***	-2.13	**-3.98***	-0.11	-0.41
Fearful	-0.14	-1.15	-0.99	**-5.90***	-0.07	-0.40	-0.59	**-4.03***	-1.86	**-4.68***	-0.68	**-3.40***
Unassertive	0.28	**2.69***	-0.09	-0.61	0.30	**2.03***	-0.02	-0.18	-0.04	-0.12	-0.13	-0.79
Introverted	0.06	0.37	0.003	0.02	-0.12	-0.56	0.01	0.03	-0.72	-1.47	-0.27	-0.17
Unsocial	-0.17	-1.68	0.13	0.96	-0.13	-0.89	0.08	0.65	-1.39	**-4.24***	-0.05	-0.31
Tough	-0.1	-0.90	0.18	1.26	-0.04	-0.26	-0.03	-0.22	-0.6	-1.74	0.22	1.26
Pas. Aggres.	0.06	0.55	0.04	0.29	-0.08	-0.05	-0.05	-0.41	-0.09	-0.26	-0.06	-0.33
Unappreciated	0.38	**3.01***	-0.12	-0.69	-0.04	-0.19	0.16	1.04	0.2	0.49	0.16	0.80
Irritated	-0.01	-0.08	-0.47	**-2.46***	-0.36	-1.80	-0.21	-1.27	-0.05	-0.11	-0.55	**-2.41***
Age (Step 2)	-0.02	-1.56	-0.5	**-2.49***	-0.01	-0.71	-0.02	-1.38	-0.05	-1.09	-0.01	0.77
Gender (Step 2)	0.48	1.86	-0.28	-0.78	-0.30	-0.81	-0.5	-1.64	-0.95	-1.15	-0.29	0.48

Note: *p < .05, **p < .01, ***p < .001

Table 3: *Multiple regression of Moving Away subscales of the updated HDS predicting the six professions of HPI.*

Table 3 shows the results of the two-step regressions using the HDS subscales that correspond to Moving Away factor. The findings showed that in the first step, gender and age accounted from 0.1% to 2% of the variance whereas the dark-traits accounted from 17 to 54%. The subscales explained more variance for Stress Tolerance and less in Reliability. Furthermore, fearful, volatile and no direction were the most influential negative predictors. Unassertive was a positive predictor for both Service Orientation and Reliability whereas unappreciative was a strong predictor only for Service Orientation. In all, Service Orientation and Stress Tolerance were explained the most from the HDS subscales corresponding to the Moving Away factor whereas reliability is explained the least. This confirmed the hypotheses.

	Service Orientation		Stress Tolerance		Reliable		Clerical		Sales		Manager	
Step 1	F(2,259) = 3.66		F(2,259) = 0.10		F(2,259) = 0.05		F(2,259) = 0.66		F(2,259) = 0.14		F(2,259) = 0.62	
	R2 adj = .02		R2 adj = 0.001		R2adj = 0.001		R2 adj = 0.001		R2 adj = 0.001		R2 adj = 0.001	
Step 2	F(14,247) = 4.21		F(14,247) = 4.81		F(14,247) = 10.24		F(14,247) = 5.2		F(14,247) = 20.84		F(14,247) = 4.61	
	R2 adj = 0.14		R2 adj = 0.17		R2 adj = 0.33		R2 adj = 0.18		R2 adj = 0.51		R2 adj = 0.16	
	β	t	β	t	β	t	β	t	β	t	B	t
Age (Step 1)	-0.02	-1.22	0.01	0.28	-0.07	-0.33	0.004	0.83	-0.02	-0.42	0.03	1.00
Gender (Step 1)	0.74	**2.36***	-0.17	-0.34	-0.04	-0.01	-0.41	0.27	-0.35	-0.33	-0.21	-0.44
Entitled	-0.12	-0.87	-0.63	**-3.10***	-0.15	-1.01	-0.31	**-2.11***	-0.48	-1.47	0.23	-1.17
Overconfidence	0.15	1.09	0.34	1.63	0.05	0.33	0.15	0.99	0.07	0.21	0.36	1.82
Fantasized Talent	0.44	**3.03****	0.85	**3.78*****	0.16	0.99	0.62	**3.78*****	1.70	**4.76*****	0.71	**3.29****
Risky	-0.09	-0.70	0.02	0.01	-0.52	**-3.65*****	-0.07	-0.50	0.82	**2.60****	0.05	0.28
Impulsive	0.41	**2.96****	0.12	0.57	-0.31	**-2.02***	0.13	0.86	1.37	**4.00*****	-0.2	-0.98
Manipulative	-0.63	**-4.01*****	-0.86	**-3.60*****	-0.52	**-3.11****	-0.57	**-3.25****	-1.02	**-2.69****	-0.59	**-2.58***
Public Confidence	0.26	**2.17***	0.41	**2.22***	0.33	**2.56***	0.57	**4.20*****	1.96	**6.65*****	0.61	**3.45****
Distractible	-0.09	-0.50	-0.18	-0.68	-0.11	-0.56	0.04	0.19	0.12	0.28	-0.41	-1.59
Self-Display	-0.21	-1.34	0.02	0.01	-0.32	**-2.01***	-0.03	-0.16	0.82	**2.28***	-0.24	-1.12
Eccentric	-0.23	-1.55	-0.91	**-3.95*****	-0.60	**-3.71*****	-0.52	**-3.12****	-0.67	-1.82	-0.59	**-2.69****
Special Sensitivity	0.15	1.07	0.18	0.84	0.05	0.32	0.34	**2.22***	-0.38	-1.14	0.32	1.56
Creative Thinking	0.05	0.44	0.21	1.19	-0.02	-0.20	-0.10	-0.79	0.75	**2.75****	0.09	0.54
Age (Step 2)	-0.03	-1.89	-0.02	-0.71	-0.01	-0.68	-0.02	-0.85	-0.09	**-2.22***	0.01	0.56
Gender (Step 2)	0.82	**2.74****	-0.09	-0.19	-0.21	-0.64	-0.33	-0.97	0.87	1.18	0.05	0.11

Note: *p < .05, **p < .01, ***p < .00

Table 4: *Multiple regression of Moving Against subscales of the updated HDS predicting the six professions of HPI.*

Table 4 shows the results of the two-step regression using the HDS subscales that correspond to the Moving Against others factor. In step 2, the variance accounted by the dark traits was from 14% to 51%, with Service Orientation accounting for less where sales accounting for more. Specifically, public confidence was a positive strong predictor for all six scores, followed by fantasised talent.

	Service Orientation		Stress Tolerance		Reliability		Clerical		Sales		Manager	
Step 1	F(2,259) = 3.66		F(2,259) = 0.1		F(2,259) = 0.05		F(2,259) = 0.66		F(2,259) = 0.14		F(2,259) = 0.62	
	R2 adj = .02		R2 adj = 0.001		R2 adj = 0.001		R2 adj = 0.001		R2 adj = 0.001		R2 adj = 0.001	
Step 2	F(8,253) = 3.28		F(8,253) = 4.04		F(8,253) = 1.96		F(8,253) = 3.37		F(8,253) = 1.39		F(8,253) = 2.61	
	R2 adj = 0.07		R2 adj = 0.09		R2 adj = 0.03		R2 adj = 0.07		R2 adj = 0.01		R2 adj = 0.05	
	β	t	β	t	β	t	β	t	β	t	B	t
Age (Step 1)	-0.02	-1.22	0.00	0.28	-0.00	-0.33	0.00	0.22	-0.02	-0.42	0.03	1.01
Gender (Step 1)	0.74	**2.36***	-0.17	-0.34	-0.00	-0.01	-0.41	-1.12	-0.35	-0.34	-0.21	-0.44
Standards	-0.16	-0.82	-0.91	**-3.05****	-0.14	-0.56	-0.74	**-3.35****	-0.10	-0.16	-0.41	-1.41
Perfectionistic	0.01	0.08	-0.24	-1.23	0.17	1.10	-0.1	-0.71	-0.81	-1.9	0.11	0.57
Organised	-0.13	-1.04	0.43	**2.28***	0.17	1.12	0.16	1.15	-0.22	-0.54	0.59	**3.21****
Indecisive	0.02	-0.14	-0.69	**-3.14****	0.23	1.30	-0.32	**-2.00***	-0.62	-1.31	-0.46	**-2.17***
Ingratiating	-0.03	-0.27	-0.11	-0.61	-0.08	-0.55	0.08	0.56	0.60	1.49	-0.01	-0.04
Conforming	0.54	**4.16*****	0.32	1.56	0.42	**2.56***	0.38	**2.56***	0.28	0.63	0.22	1.01
Age (Step 2)	-0.02	-1.19	-0.04	-1.35	0.00	0.04	-0.01	-0.73	-0.04	-0.77	0.004	0.15
Gender (Step 2)	0.08	**2.90****	-0.09	-0.19	0.04	0.09	-0.27	-0.74	-0.10	-0.1	-0.26	-0.55

Note: *p < .05, **p < .01, ***p < .00

Table 5: *Multiple regression of Moving Towards subscales of the updated HDS predicting the six professions of HPI.*

Table 5 shows the results of the two-step regression using the HDS subscales that correspond to the Moving Towards others factor. In step 2, the variance accounted by the dark side traits was from 1% to 9%, with sales accounting for less whereas Stress Tolerance accounting for more. It seems that the most common predictor of the six work outcome scores is organised and conforming which are positive predictors and indecisive and standards are negative predictors.

Discussion

The first findings concerned the internal reliability of the dark-side facet model HDS. Around half of the alphas are within acceptable ranges (for three subscales per scale) implying some revisions of the measure may be necessary. There are those however who see the alpha as a potential measure of redundancy and are more forgiving of low alphas as long as the scales show other measures of reliability (test-retest, split half) and more particularly validity (construct, predictive).

Regarding the second aim of the study our hypothesis were partially confirmed. As research has shown [42] traits that are related with Borderline and Neurotic characteristics have negative relation with work-related effects such as performance. As in Furnham et al.'s (2012) study, personality traits that are related with moody, mercurial, Volatile behaviours (Excitable) are difficult to work with and consequently are negative predictors of the six work variables. Our results confirmed, the hypothesis that subscales of the Moving Away from Others factor will be negative predictors of various aspects of work success. The facet *unassertive* was a positive predictor for service orientation and reliability. Making decisions slowly seems to be beneficial for occupations that are related with integrity and pleasing clients and/or others. It provides a feeling of cooperativeness.

Our second hypothesis was partially confirmed. We found that subscales such as "fantasied talent" and "public confidence" are the strongest positive predictors amongst most of the professions. Interestingly, overconfidence was not a significant predictor. This suggests that people with confidence are perceived capable, whereas the truth seems to be that it is their belief in their fantasied talent that is what makes them seem more successful. In addition, we found that the *manipulation* and *eccentricity* are negative predictors in most of the outcome variables, whereas *risky* and *self-display* are positive predictors for sales but strong negative predictors for reliability. Moreover, "impulsive" is a positive predictor of Service Orientation and sales but negative for Reliability. These findings are in line with Furnham at al. (2012), and Furnham (2018b) showing that Mischievous was a positive predictor of Service Orientation, sales and negative for Reliability.

Our hypothesis about the super-factor moving towards others was partly confirmed, however two subscales were positive predictors and two negative predictors of the outcome measures. More specifically, the facets *standards* and *indecisive* were both negative predictors for Stress Tolerance and Clerical. In addition, *indecisive* as also a negative predictor for Managerial Success. *Organised* and *standards* were positive predictors for Stress Tolerance, Manager Success and Service Orientation, Reliability and Clerical accordingly. Interestingly, *standards* and *organised* are both traits associated with Conscientiousness (that is the strongest work-related predictor for success in any profession [32]. However, the former is a negative predictor whereas the latter is a positive predictor. A possible explanation could be that standards may be more associated with micro-managing thus being a negative predictor. This an example of where a facet approach can explain anomalies or paradoxes in the literature.

Another interesting finding was that the variance explained by this factor was very low (less than 10%). A possible explanation for this outcome could be that mainly Stress Tolerance and Clerical variables were explained by these subscales whereas sales was not predicted by any subscale. Clerical is associated with professions related to follow directions which is reasonably explained by subscales that are related to Dutiful.

The updated HDS provides us with some very useful insights as to which subscales are the ones that make each scale a positive or a negative

predictor. Primarily, *volatile* and *no direction* and *fearful* are the stronger subscales that contribute to make the Moving Away from others as overall a negative predictor for job success. *Cynical, tough, passive-aggressive, introverted* and *mistrusting* are not predictors in any occupation whereas *unassertive* is a positive predictor for only two professions. This leads us to the conclusion that uncertainty, burst of anger and fear are the strongest traits contributing to someone being unsuccessful at work and leading to potential derailment. Moreover, *public confidence* is the only positive predictor for all six work outcome measures, followed by fantasised talent. *Manipulative* and *eccentric* are negative predictors, followed by *entitled*. *Risky, impulsive* and *self-display* are positive predictors for some occupations but negative for others. Interestingly, *overconfidence distractible* were not predictors on any of the six work success scales. There is a fine line between *overconfidence, fantasised talent* and *public speech* in terminology. The difference of *overconfidence* and *fantasised talent* is that in the former the individual believes generally in his/her abilities whereas in the later believes that possess unusual perhaps unique talents, in. Public confidence is more on making people engaged and presenting ideas with enthusiasm and energy.

Finally, the ability to be meticulous and on time as well as supportive, cooperative and putting aside personal feelings while following instructions are the strongest predictors of work success. This is no doubt because it gives the impression of a reliable individual that is able to execute orders even if (s)he believes that those are not correct, showing a high level of maturity. *Standards* has a negative relation since it seems to be related to micro-managing thus never being able to please with someone's work and being fixated in trivial things. Also, *indecisive* is perceived as lack of independent thinking and being proactive. Interestingly, *perfectionism* and *ingratiating* do not predict anything. A possible explanation could be that *standards* is about being fixated with high performance that could lead to micro-managing, *perfectionism* is about work in general whereas organised is more about time, rules and thoroughness. As, in the case of *conforming* it shows a level of maturity and responsibility, whereas standards and perfectionism can be perceived as peculiar, perhaps excessive behaviours.

Implications

To our best knowledge, this is the first study assessing the updated HDS and looking at the six work success measures of the HPI. Whilst there is some doubt about the internal reliability of some scales and the overall factor structure it was evidence that this new measure with facet scores can aid to the understanding of derailment at work. Indeed, there may be rather different types of derailment related to different counterwork-productive behaviours which are related to the same dark-side trait but different facets of it. Certainly, both candidates and consultants using the HPI which has facets for each trait often report a far better understanding of the feedback after a detailed examination of the facets.

Limitations

It should be recognised that most psychometricians recommend a minimum alpha of .70 and most did not achieve that target. The major problem with this paper is method invariance as both predictor and criterion used self-report measures which usually leads to Type II errors. Nearly all I/O researchers and consultants lament, but are also surprised by the fact, that organisations appear to have little or no objective data on performance, save perhaps rather unreliable supervisor ratings or a limited amount of multi-source data. It would also have been desirable to know more about the participants such as their work experience, level and job sector which we know are relayed to dark-side factors [37].

Future research

Further studies would benefit from using larger samples as well as having observer and/or behavioural measures of success such as multi-source

ratings, speed of promotion or managerial level attained. More importantly it would be desirable to establish typical profiles of facets within each dark side variable to understand how similar domain scores have very different work consequences.

References

1. Altman, D. G. (1991). *Practical Statistics for Medical Research*. Chapman & Hall: London.
2. American Psychiatric Association. (2000). *Diagnostic and statistical manual of mental disorders* (4th ed., text rev.) Washington, DC: Author.
3. Bentler, P. M., & Bonett, D. G. (1980). Significance tests and goodness of fit in the analysis of covariance structures. *Psychological Bulletin, 88*, 588 - 606.
4. Board, B. J., & Fritzon, K. (2005). Disordered personalities at work. *Psychology, Crime & Law*, *11*, 17-32.
5. Brown, T. A. (2015). *Confirmatory factor analysis for applied research* 2nd edition. The Guilford Press: New York.
6. Cortina, J. M. (1993). What is coefficient alpha: an examination of theory and applications? *Journal of Applied Psychology, 78*, 98-104.
7. Costa, P. T., Jr., & McCrae, R. R. (1992). *Revised NEO Personality Inventory (NEO-PI-R) and NEO Five-Factor Inventory (NEO-FFI) Professional Manual.* Odessa, FL: Psychological Assessment Resources.
8. Dilchert,S., Ones, D.S., & Krueger, R.F.(2014). Maladaptive Personality Constructs, Measures, and Work Behaviors *Industrial and Organizational Psychology*, 7, 98-110.
9. Field, A. (2013). *Discovering statistics using IBM SPSS statistics*. Sage.
10. Furnham, A. (2018a). Personality and Occupational Success. In Virgil Zeigler-Hill & Todd K. Shackelford (Eds*). The SAGE Handbook of Personality and Individual Differences.* New York: Sage. Pp 537-551.
11. Furnham, A. (2018b). Dark Side Correlates of Job Reliability and Stress Tolerance in two large samples. *Personality and Individual Differences, 117,* 255-259.
12. Furnham, A., & MacRae, I. (2020). The Dark Side of Work Values. *Current Psychology, 39,* 1725-1731.
13. Furnham, A., Trickey, G., & Hyde, G. (2012). Bright aspects to dark side traits: Dark side traits associated with work success. *Personality and Individual Differences*, *52*, 908-913.
14. Furnham, A., Hyde, G., & Trickey, G. (2013a). The values of work success. *Personality and Individual Differences, 55,*485-489.
15. Furnham, A., Crump J., & Ritchie (2013b). What it takes: Ability, demographic, bright and dark side trait correlates of years to promotion, *Personality and Individual Differences, 55,* 952-956.

16. Furnham, A., Richards, S., & Paulhus, D. (2013). The Dark Triad: A 10-year review. *Social and Personality Psychology Compass, 7,* 199-216.

17. Furnham, A., Humphries, C., & Zheng, E (2016). Can successful sales people become successful managers? Differences in Derailers and Motives across two jobs. *Consulting Psychology Journal: Practice and Research, 68*, 252-268.

18. Gaddis, B. H., & Foster, J. L. (2015). Meta-Analysis of Dark Side Personality Characteristics and Critical Work Behaviors among Leaders across the Globe: Findings and Implications for Leadership Development and Executive Coaching. *Applied Psychology*, *64*, 25-54.

19. Gøtzsche-Astrup, O., Jakobsen, J., & Furnham, A. (2016). The higher you climb: dark side personality and job level in a sample of executives, middle managers, and entry-level supervisors. *Scandinavian Journal of Psychology, 57*, 535-541.

20. Grijalva, E., Newman, D. A., Tay, L., Donnellan, M. B., Harms, P. D., Robins, R. W., & Yan, T. (2015). Gender differences in narcissism: A meta-analytic review. *Psychological Bulletin*, *141*, 261-275.

21. Harms, P. D., Spain, S. M., & Hannah, S. T. (2011). Leader development and the dark side of personality. *The Leadership Quarterly*, *22*, 495-509.

22. Harrison, S., Furnham, A., & Grover, S. (2018). The perception of personality disorders by employers, employees and co-workers. *Psychiatry Research, 270,* 1082-1091.

23. Hogan, R. (2014). *Hogan Development Survey: Form Five. Technical Manual*. Tulsa, OK: HAS.

24. Hogan, R., & Hogan, J. (1997a). *Hogan development survey manual*. Tulsa, OK: HAS.

25. Hogan, R., & Hogan, J. (1997b). *Hogan personality inventory manual*. Tulsa, OK: HAS.

26. Hogan, R., & Hogan, J. (2001). Assessing leadership: A view from the dark side. *International Journal of Selection and Assessment, 9*, 40–51.

27. Hogan, R., & Hogan, J. (2009). *Hogan development survey manual*. Tulsa, OK: HAS.

28. Horney, K. (1950). *The Collected Works of Karen Horney* (Vol. 2). New York: WW Norton.

29. Judge, T. A., Rodell, J. B., Klinger, R. L., & Simon, L. S. (2013). Hierarchical representations of the Five Factor Model of Personality in predicting job performance: Integrating three organizing frameworks with two theoretical perspectives. *Journal of Applied Psychology, 98,* 875–925.

30. Kaiser, R. B., LeBreton, J. M., & Hogan, J. (2015). The dark side of personality and extreme leader behavior. *Applied Psychology*, *64*(1), 55-92.

31. McCrae, R. R., & Costa Jr, P. T. (1999). A five-factor theory of personality. *Handbook of personality: Theory and Research*, *2*, 139-153.

32. Li, N., Barrick, M. R., Zimmerman, R. D., & Chiaburu, D. S. (2014). Retaining the productive employee: The role of personality. *Academy of Management Annals, 8,* 347–395.

33. Lusk, D., & Hayes, T. (Eds). (2021). *The Good, the Bad, and the Human Dark Side at Work.* New York: SIOP.

34. Nagpal, J., Kumar, A., Kakar, S. & Bhartia, A. (2010). The Development of 'Quality of Life Instrument for Indian Diabetes Patients (QOLID). *Journal of Association Physicians India, 58*, 295-305.

35. Ouimet, G. (2010). Dynamics of narcissistic leadership in organizations: Towards an integrated research model. *Journal of Managerial Psychology*, *25*, 713-726.

36. Palaiou, K., & Furnham, A. (2014). Are bosses unique? Personality facet differences between CEOs and staff in five work sectors. *Consulting Psychology Journal: Practice and Research, 66,* 173-196.

37. Palaiou, K & Furnham. A. (2018). The Dark Side of CEOs: Personality Disorder differences between CEOs and their staff in five work functions.

38. Simonet, D**. V.**, Tett, R. P., Foster, J., Angelbeck, A., & Bartlett, J. (*2017*). Dark side personality trait interactions: Amplifying negative predictions of leadership performance. *Journal of Leadership and Organizational Studies*.

39. Spain, S. M., Harms, P., & LeBreton, J. M. (2014). The dark side of personality at work. *Journal of Organizational Behavior*, *35*(S1), S41-S60.

40. Strainer, D. L., & Norman G. R. (2008). *Health measurement scales: a practical guide to their development and use*. Oxford University Press: Oxford.

41. Teodorescu, A., Furnham, A., & Macrae, I. (2017). Trait correlates of success at work. *International Journal of Selection and Assessment, 25,* 36-42.

42. Thompson, R.J, Payne, S.C, Horner, M.T., & Morey LC. (2012). Why borderline personality features adversely affect job performance: The role of task strategies. *Personality and Individual Differences, 52*, 32–36.

43. Winsborough, D. L., & Sambath, V. (2013). Not like us: An investigation into the personalities of New Zealand CEOs. *Consulting Psychology Journal: Practice and Research, 65*, 87-107.

44. Treglown, L., Zivkov, K., Zarola, T., & Furnham, A. (2018). Intention to quit and the role of dark personality and perceived organizational support: a moderation and mediation model. *Plos One,* 13e, 0195155.

Ready to submit your research? Choose Auctores and benefit from:

★ fast, convenient online submission
★ rigorous peer review by experienced research in your field
★ rapid publication on acceptance
★ authors retain copyrights
★ unique DOI for all articles
★ immediate, unrestricted online access

At Auctores, research is always in progress.

Learn more auctoresonline.org/journals/nutrition-and-food-processing