

Measuring the Aspects “Machiavellianism”, “Narcissism” and “Psychopathy” in the Indian Context on Original Sd3 Scale

¹Samiul Biswas, ²Dr. Anshu Narad,

¹Research Scholar, Department of Education, Lovely Professional University, Phagwara, Punjab, India, Email : samiulbiswas88@gmail.com

²Professor, Department of Education, Lovely Professional University, Phagwara, Punjab, India

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Abstract:

Aim and Objectives:

To evaluate a sample's psychometric attributes of 652 students from secondary school aged 14–18 at a co-ed school in West Bengal. The study aims to validate the Short Dark Triad (SD3) in the context of India.

Background:

Several studies have documented the application of the SD3 from various cultural backgrounds, from Portugal, Serbia, Delhi, United Kingdom, and Kolkata. This study is also one of the few to concentrate on the tool's validation in India.

Research Design:

Through structural equation modelling, research methodologies are culturally validated. The tool's factor structure was created using EFA. CFA was then used to determine and validate the factors that had been retrieved.

Research Method:

Stage I involved cleaning and exporting the data generated by the research instrument into the SPSS version 23.0, a user-friendly statistical database. The Stage II participants included secondary school students from designated co-ed schools in West Bengal, aged 14 to 18, who were assessed on the factor structure. In stage III, factors that emerged from the study were confirmed.

Findings:

“Machiavellianism”, “Narcissism”, and “Psychopathy”, three factors of the total of twenty-six items that are in line with the original SD3 scale, arose. For evaluating Dark Personalities in teenagers between the ages of 14 and 18, the Indian version is valid and reliable.

Conclusion:

The psychometric evaluation revealed that the existing scale's characteristics were sufficient for gauging teenage dark personalities in the setting of India. This scale will facilitate understanding the prevalence and underlying mechanisms of psychosocial factors contributing to dark character in school-aged adolescents.

Keywords: “Psychopathy”, Machiavellianism, Dark Triad, and Narcissism.

INTRODUCTION:

According to Burt et al. (2008), personality can predict significant life outcomes, such as crime and antisocial behaviour—characteristics linked to antisocial conduct and substance misuse. The person logical characteristics of substance abusers and persistently antisocial individuals are similar (Krueger, 1999). Schuessler and Cressey discovered in 1950 that there were substantial differences between criminals and noncriminals in 42% of the "personality tests" they studied. Following this, Waldo et al., 1967 reevaluated this area of research. They discovered that 81 per cent of more recent research on the relationship between criminal behaviour and

personality could distinguish between groups of criminals and noncriminals. Tennenbaum, 1977 observed that from 1966 to 1975, 80 per cent of personality tests found substantial differences between noncriminals and criminals in a final examination of this research (Miller et al., 2001).

Orwell shared the abovementioned view that there is some potential for human goodness. (Newman and others, 2020) Despite the terrible violence that humans have committed and continue to engage in (Harari, 2014), violence rates have decreased throughout human history (Pinker, 2012). Therefore, both good and bad tendencies can be found in human nature. Undoubtedly, some people are more darkly inclined than others (Neumann & Hare, 2008), but society's distribution of light and dark traits is less well understood.

Long (2000) refers to "personality as those stable characteristics by which individuals differ from each other and which acts as the basis for what they do. It is a label normally applied to interpersonal behaviour. We would, for instance, typically say that a socially outgoing person has an extraverted personality" (as cited in Jusuf, 2018). For Parveen and John (2001), "personality represents those characteristics of the person that account for consistent patterns of feeling, thinking and behaving" (as cited in Jusuf, 2018). Numerous significant life outcomes, such as crime and antisocial behaviour, are predicted by personality (Trull & Sher, 1994; Cale, 2006). It remains to be investigated whether these connections are distinct from well-documented variations in antisocial conduct. Research suggests specific personality factors can predict antisocial behaviour (Burt et al., 2008).

According to Kaufman et al. (2019), "We all have, within each of us, both a light and a dark side". A person's dark and light sides influence personality development (Sevi et al., 2020). In 2020, Siddiqui et al. studied Delhi students from the College of India to validate the short dark traits (SD3) in an Indian context. Swati's (2017) PHD thesis on 290 young adults in Panjab showed that Moral Judgement had no significant correlation with "Machiavellianism", "Narcissism" and "Psychopathy". Moral Identity Internalization and "Machiavellianism" had good relationships with one another. It was discovered that Moral Identity Internalization was considerably adversely correlated with "Psychopathy" and "Narcissism".

Paulhus et al., 2002 claim that the term "dark triad" refers to a combination of three theoretically separate but empirically connected aspects of abusive personality; "Narcissism", "Psychopathy", and "Machiavellianism". These characteristics are related to undesirable professional behaviours such as lying and workplace deviance (Zettler & Solga, 2013). Recently research has highlighted the need to understand the situations and places where dark triad personality traits might be useful (Schyns, 2015).

According to Wilson et al. (1996), "Machiavellianism" is a personality trait that describes "intelligent, self-centred, and manipulative people using deceitful strategies to pursue their goals." According to Tariq, Amad, and Lingjie (2002), "Psychopathy" is characterized by "selfishness, impulsivity, shallowness, lack of remorse or empathy, and manipulative nature." Narcissists have a superiority complex and frequently seek praise, affirmation, and encouragement. They often behave harshly and without empathy because they enjoy receiving credit (Tariq, Amad, & Lingjie, 2021). "Machiavellianism" is "a strategy of social conduct that involves manipulating others for personal gain, often against the other's self-interest" (Wilson et al., 1996). Lack of empathy, greed, the capacity to manipulate and take advantage of others for gain, and lying are examples of Machiavellian personality traits (Jones et al., 2009). Alternatively, "psychopathy" is defined as "a personality trait involving an arrogant and deceitful interpersonal style, as well as an impulsive and irresponsible behavioural style." (Boey & Vantilborgh, 2016).

Narcissists are grandiose self-promoters who depend on the approval of others to survive (Paulhus, 2014). Selfishness and an overinflated idea of self are traits of narcissists (Paulhus & Williams, 2002). Back et al., 2013 discussed the "bright" and "dark" sides of "Narcissism", as well as selfish competition. The pursuit of originality, lofty fantasies, and a beautiful demeanour are all characteristics of narcissistic admiration. The purpose of superiority, the devaluation of others, and violent behaviour are characteristics of selfish rivalry. Narcissistic rivalry involves haughty and combative behaviour, whereas narcissistic admiration results in a self-assured, dominant, and expressive demeanour (Furtner et al., 2017).

Paulhus (2014) asserts that Machiavellians are accomplished manipulators who aim for deliberate, sustained exploitation of others. Hawley (2003) claims that Machiavellians are "coercive controllers" that employ a versatile mix of The best pro- and antisocial methods to accomplish their goals regarding professional success. Strategic and doubtful According to Machiavellians, the key to success in life is interpersonal manipulation (Furnham et al., 2013). Their main goals are acquiring wealth, status, and power; they are callous and cold-hearted (Furtner & Baldegger, 2016, as cited in Furtner et al., 2017).

"Psychopathy" is described by the following traits: callousness, lack of empathy, impulsivity, thrill-seeking, and social manipulation (Hare, 2003; Cleckley, 1976; Paulhus et al., 2002). According to Hare (2003), "Psychopathy" is divided into two connected factors: "Primary Psychopathy", characterized by ruthless and deceptive behaviours, and "Secondary Psychopathy", indicated by antisocial behavioural inclinations. Jones and Figueredo (2013) state that Factor 2 differs greatly from "Machiavellianism" and "Narcissism".

Review Related Literature:

Pechoro et al. (2018) recruited 412 young people from Portugal (212 female and 200 male) for their study to validate the Short Dark Triad (SD3) tool. Low adjusted item-total correlations and low loadings, six items (M1, M2, N6, N9, P1, and P2) were eliminated from SD3. Siddiqui et al. (2020) validated the DT scale using from Delhi and the National Capital Region, Indian college students (490 males and 337 females, ages 18 to 21 for Study 1, 230 males and 149 females, ages 18 to 22 for Study 2, and 131 females and 37 males, ages 17 to 35 for Study 3). Due to low factor loading (0.40) in this procedure, 14 items were discarded, and ultimately 13 articles were created. Douglass et al. (2023) validated the SD3 scale in the United Kingdom. Analysis of the factors didn't result in any deletions. Dinić et al. (2018) conducted three research to evaluate the convergent and discriminant validity of the Dark Triad Dirty Dozen and SD3 translations into Serbian. In this study, there were no SD3 items eliminated. Except for SD3's "Psychopathy", the impact sizes were modest. SD3 was measured by Zhang et al., 2020, and the results were translated into Chinese (SD3-C). The results show no SD3 items were deleted in this study, and the SD3-C scores are like the English SD3 in behaviour.

Methodology:

Seven hundred West Bengal state secondary school students between 14 and 18 were chosen using a straightforward random sample. Only 652 participants' responses to the initial 700 surveys were received. Forty-eight questionnaires were disregarded because of missing and erroneous data. The final dataset that was scored includes 652 responses from 700 secondary school pupils; the minimal subjects-to-item ratio of 10:1 was proposed by Bentler et al. in 1987 (Arifin et al., 2018).

Variables and Measures:

The Dark Triad is summarized in the SD3 personality trait model consisting of only 27 components. In 2014, Jones and Paulhus created it. Each of the three SD3 components—"Machiavellianism", "Narcissism", and "Psychopathy"—is evaluated using nine things. On a Likert scale of 1 to 5, participants rate how much they concur with the following statements: "Narcissism" ("strongly disagree = 1 to agree = 5 strongly"). (for instance, "People see me as a natural leader"), "Machiavellianism" ("It's not wise to tell your secrets"), and "Psychopathy" ("People who mess with me always regret it"), among others.

Analysis:

To analyze the data, 23 SPSS and AMOS versions were utilized. It was necessary to compute the chi-square (2/df), root-mean-squared error of approximation (RMSEA), comparative fit index (CFI), and standardized root mean residual (SRMR) to evaluate the goodness of fit. Arifin et al. (2018); Hare et al. (2012).

In the Indian sample, SD3-27 demonstrated a Cronbach's alpha of 0.892, indicating strong internal consistency. Table 1 displays Cronbach's alpha if an item is eliminated and the corrected item-total correlation analysis. All of the data from this study were kept for future research, except for item P8 from the "Psychopathy" dimension, which was deleted since its adjusted item-total correlation value was less than 0.30 (Yasir, 2016).

Jones and Paulhus (2013) state that the P8 item has a "Callous effect" quality. Internal consistency reliability for the psychological construct was calculated to be 0.60 with Cronbach's alpha, according to Kyriazos et al. (2018) and Kline (1999) (Chakraborty et al., 2021). According to George & Mallery (2003), who defined Cronbach's alpha, "greater than 0.80 is acceptable" (Gupta et al., 2019). According to Kim et al. (2016), internal consistency is commonly graded as excellent if it is greater than 0.9 and good between 0.7 and 0.9.

Table – 1: Reliability information of the SD3–27

The Cronbach's alpha index for the 27 items is shown in the fifth column, and the alpha index for each dimension with nine items is shown in the seventh column.

Dimension	Items	Item-Total Correlation Corrected (Dimension-wise)	Index of Cronbach's Alpha (Dimension-wise)	Item-Total Correlation Corrected	Index of Cronbach's Alpha (27 entries)
“ Machiavellianism”	M1	.972	0.989	.579	0.892
	M2	.969		.565	
	M3	.811		.507	
	M4	.939		.534	
	M5	.962		.579	
	M6	.969		.576	
	M7	.962		.565	
	M8	.962		.591	
	M9	.988		.588	
“ Narcissism”	N1	.778	0.943	.333	
	N2	.763		.379	
	N3	.762		.353	
	N4	.768		.316	
	N5	.788		.337	
	N6	.737		.341	
	N7	.819		.315	
	N8	.824		.333	
	N9	.788		.382	
“ Psyc honath	P1	.791		.526	
	P2	.868		.547	

	P3	.704	0.924	.437
	P4	.853		.510
	P5	.849		.514
	P6	.754		.489
	P7	.734		.429
	P8	.027		.084
	P9	.837		.487

Table- 1.1: After removing item P8 of the “Psychopathy” dimension, the Cronbach’s Alpha Index of each size and total items of DT

SL. No	Dimensions	Index Cronbach's Alpha
1	“Machiavellianism”	0.989
2	“Narcissism”	0.943
3	“Psychopathy”	0.924
Total	DT	0.892

Exploratory Factor Analysis (EFA) and Descriptive Analysis (DA)

Table-2 lists the factor loadings determined by the CFA analysis and the item-level descriptive statistics for the SD3-26. On 326 secondary school pupils, EFA was used to extract three factors— “Machiavellianism”, “Narcissism”, and “Psychopathy”—using the varimax rotation and Kaiser Normalization approach. Items from the survey that did not meet the cutoff for 0.4-factor loadings during factor analysis were removed (Chan et al., 2017). Three-dimensional factor loading in all cases exceeds 0.04. In this study, there were no cross-loadings on any of the measures. These variables accounted for 78.304% of the overall variance, as shown in Table 3. The first three eigenvalues extracted and kept were 8.551, 6.420, and 5.389, respectively. The initial element accounted for 32.887% of the variation, whereas the last two components accounted for 24.691 and 20.726.

According to Hutcheson and Sofroniou (1999) (as mentioned in Karaca et al., 2022), If the KMO number is between 0.7 and 0.8, the sample size is good, excellent in the 0.8–0.9 range and exceptional above 0.9. The KMO score for the study was 0.925, indicating that the sample size and data collected were sufficient and appropriate for the factor analysis (Karaca et al., 2022). Additionally, the chi-square result from Bartlett's test of sphericity (Bartlett 1950) must be substantial. Factor analysis should therefore be appropriate if it is significant ($p < .05$). (Tabachnick and Fidell, 2001; Hair, Anderson et al., 1995a, as quoted in Taherdoost et al., 2022). There is no identity matrix in the matrix, according to this.

Kaiser-Meyer-Olkin.		.925
Bartlett's Test of Sphericity	Approx. Chi-Square	11558.685
	df	325
	Sig.	.000

Table– 3: Information about the SD3-26 and the factor loadings as a result of CFA

	Items	Statements	Nature of Items	Mean	SD	Factor loading		
						Mach	Nar	Psy
“ Machiavellianism”	M1	“It’s not wise to tell your secrets.”	“Reputation”	4.1196	.71540	.977		
	M2	“I like to use clever manipulation to get my way.”	“Manipulation”	4.1196	.71540	.976		
	M3	“Whatever it takes, you must get the important people on your side.”	“Coalition building”	4.0675	.79714	.842		
	M4	“Avoid direct conflict with others because they may be useful in the future.”	“Coalition building”	4.1227	.68183	.950		
	M5	“It’s wise to keep track of information you can use against people later.”	“Planning”	4.1196	.71540	.970		
	M6	“You should wait for the right time to get back at people.”	“Planning”	4.1196	.71540	.974		
	M7	“There are things you should hide from other people to preserve your reputation.”	“Reputation”	4.1196	.71540	.969		
	M8	“Make sure your plans benefit yourself, not others.”	“Planning”	4.1196	.71540	.969		
	M9	“Most people can be manipulated.”	“Manipulation”	4.1288	.69413	.990		
“ Narcissism”	N1	“People see me as a natural leader.”	“Leadership”	3.5828	.68222		.826	
	N2	“I hate being the centre of attention.”	“Exhibitionism”	3.5644	.67516		.816	
	N3	“Many group activities tend to be dull without me.”	“Grandiosity”	3.5828	.66394		.813	
	N4	“I know I am special because everyone keeps telling me so.”	“Grandiosity”	3.5828	.67314		.819	
	N5	“I like to get acquainted with important people.”	“Entitlement”	3.5859	.66355		.838	
	N6	“I feel embarrassed if someone compliments me.”	“Exhibitionism”	3.6104	.65521		.792	
	N7	“I have been compared to famous people.”	“Grandiosity”	3.5982	.64297		.860	
	N8	“I am an average person.”	“Grandiosity”	3.5951	.64820		.866	
	N9	“I insist on getting the respect I deserve.”	“Entitlement”	3.5828	.66855		.833	
“ Psychopathy”	P1	“I like to get revenge on authorities.”	“Antisocial behaviour”	3.7699	.81476			.843
	P2	“I avoid dangerous situations.”	“Erratic lifestyle”	3.8067	.82055			.906
	P3	“Payback needs to be quick and nasty.”	“Callous affect”	3.8190	.83817			.768
	P4	“People often say I’m out of control.”	“Erratic lifestyle”	3.7975	.82767			.895
	P5	“It’s true that I can be mean to others.”	“Callous affect”	3.7761	.84244			.894
	P6	“People who mess with me always regret it.”	“Antisocial behaviour”	3.8221	.82216			.811
	P7	“I have never gotten into trouble with the law.”	“Antisocial behaviour”	3.8221	.82589			.796
	P9	“I’ll say anything to get what I want.”	“Short-term manipulation”	3.7914	.84091			.887
	Eigen Values						8.551	6.420
% of variance						32.889	24.691	20.726
Cumulative %						32.887	57.578	78.304
Mach=“Machiavellianism”, Nar= “Narcissism”, Psy = “Psychopathy”								

The extraction method is principal component analysis, as noted. The rotation approach uses Varimax with Kaiser Normalization. Factor loadings below |0.40| are not provided for clarity.

Confirmatory Factor Analysis (CFA)

Confirmatory factor analysis was described by Sorbom, Joreskog, and others (2004) as another application of structural equation modelling is the "linear structural relationship model" (Gupta et al., 2019). Additionally, 326 students from secondary schools were subject to CFA traditionally. To interpret the fit index, we provide a fantastic model with CFI = 0.969 > 0.95, CMIN/DF = 2.113 < 3, SRMR = 0.037 < 0.08, RMSEA = 0.059 < 0.06, TLI = 0.966 > 0.95 and PClose = 0.015 > 0.05 is acceptable (Hu and Bentler, 1999).

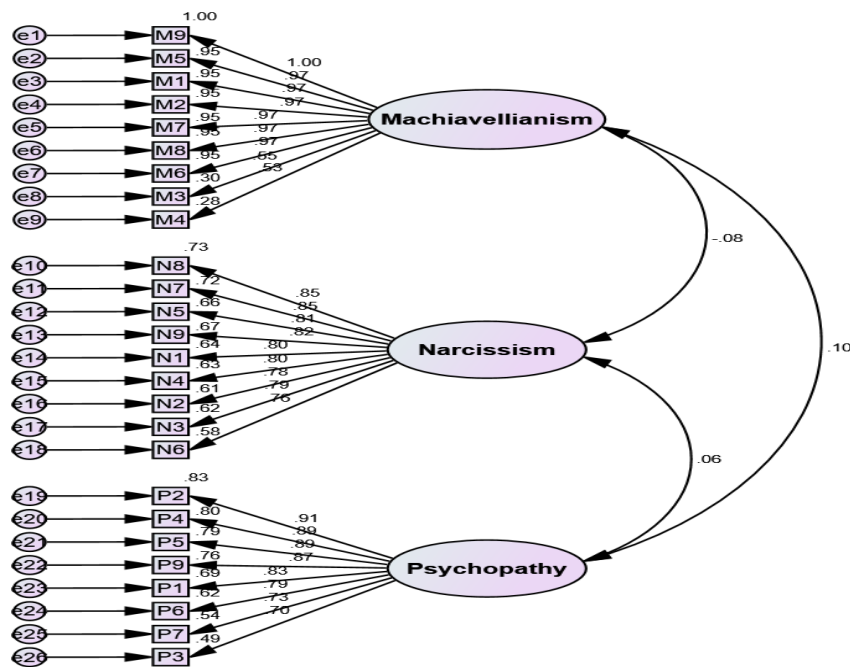


Figure -1: CFA measurement model

Validity:

The validity of each construct has been examined in this study using the criteria established by Campbell et al., 1959. (Bagozzi et al., 1991). This criterion can distinguish convergent and discriminant validity (Henseler et al., 2009; Campbell and Fiske, 1959, as cited in Jain et al., 2022). According to Gupta et al. (2019), evaluations of experimental validity and reliability (discriminant and convergent) are necessary to establish construct validity.

Table-4: Displaying the MSV, CR, AVE, ASV and MaxR(H) values for each DT dimension

	CR	AVE	MSV	MaxR(H)	ASV
“Machiavellianism”	0.973	0.807	0.010	1.000	0.203
“Narcissism”	0.944	0.651	0.006	0.945	0.185
“Psychopathy”	0.946	0.689	0.010	0.956	0.006

✓ Convergent Validity:

Composite Reliability (CR) and Average Variance Extracted (AVE) are the measures for evaluating convergent validity. For this, any construct must meet the following prerequisites: Hair et al. (2012) found AVE > 0.5 and CR > AVE, respectively.

Table-4 shows the value of AVE and CR of each construct is greater than 0.5 and 0.7, respectively and CR > AVE.

✓ **Discriminant Validity:**

The measurements of the scale's concept, called the average variance extracted (AVE), maximum shared variance (MSV) and average shared variance (ASV), are used to test the discriminant validity of the scale. Each construct must meet the requirements listed below to show discriminant validity: $ASV > AVE$ and $MSV > AVE$ (Hair et al., 2012; Jain et al., 2021);

Each construct's AVE is higher than its MSV and ASV statistics, as seen in Table 4, supporting the scale's discriminant validity.

Espino-Rodriguez et al., 2018 and Fornell et al., 1981 state that AVE measurements' square root must perform better than other construct correlations combined. According to Espino-Rodriguez et al. (2018), each construct's composite reliability (as indicated in O'Cass and Ngo's 2007 study) and the correlation between the two constructs are the same. According to Table 5 below, the correlations between the constructs have values that are lower than their respective reliabilities, proving the discriminant validity. The AVE's major diagonal, or square root, is always preferable to the correlations between the components.

Table-5: Average Extracted Variance (AVE), Composite Reliability (CR), and Correlations Matrix Square Root.

	“Machiavellianism”	“Narcissism”	“Psychopathy”	CR
“Machiavellianism”	(0.898)			0.973
“Narcissism”	-0.076	(0.807)		0.944
“Psychopathy”	0.098	0.059	(0.830)	0.946
Significance of Correlations: $p < 0.100$ (Hu et al., 1999)				
It should be noted that the AVE values in bold are the square roots of the values outside the diagonal that reveal correlations between the constructs.				

Discussion:

The fundamental composition of the SD3 measure was characterized using Jones and Paulhus' three-factor model (2014). Another goal was to see if this structure could be duplicated with an Indian sample. In the Indian model, the measure demonstrated a solid design and respectable psychometric qualities. This study examined SD3's factor structure and the measure's convergent and discriminant validity. This study's goals included investigating the validity of the SD3 questionnaire. The SD3 factor structure was approved using CFA. Jones et al., 2014 found that the three-factor answer best fits the model. According to Paulhus and Williams (2002), these components correlate highly with the three theoretical dimensions. The RMSEA and GFI suggested a good or adequate model fit, and χ^2/df . The current study's questionnaire can be used to evaluate secondary school students' Dark Triad Personalities. The careful methodological procedure to achieve quantitative validation of a scale assessing the Short Dark Triad (SD3) of Indian secondary school pupils has been introduced in the current research. As a result, the scale ultimately met all requirements for validating the Indian context, including reliability, validity, EFA, and CFA.

Limitations and Suggestions for future research:

Our research, however, had several drawbacks. A consistent sample size was used for the confirmatory factor analysis. A larger sample size is preferred to obtain more accurate results from CFA. SD3 is only estimated using secondary school students. The Short Dark Triad (SD3) scale is available for students in colleges and universities.

Further replication of the same study in time-series design, longitudinal methods, and experimental settings is possible. Self-reported questionnaires, prone to response bias, were used to obtain the data. Reliability can be used for internal consistency by the Test-retest method and can be compared to the Jones and Paulhus

(2014) research. Future studies can use this measure to understand the Dark Triad personality traits impact on adolescent Indian students.

Conclusion:

The discussion above shows how well the SD3 questionnaire works in the Indian setting. Only item P8 ("I enjoy having sex with people I hardly know") of the "Psychopathy" dimension of "Callous affect" (Jones and Paulhus, 2013) nature was rejected due to low value (<0.30) of corrected item-total correlation. The P8 statement on "Psychopathy" shouldn't have been applied to the Indian setting, but it was. However, Douglass et al. (2023), Dini et al. (2018), Pechoro et al. (2018), and Zhang et al. (2010) have also applied this statement to other situations and different sample sizes. Future research might use this data to evaluate the SD3 among adolescents to forecast various behaviours and life trajectories. Our research could be used as a guide for the SD3's potential use in adolescent populations in the future.

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