Cross Cultural Adaptation of the Dark Personality Instrument for the Indonesian Context: A Preliminary Study

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Abstract. This study aimed to adapt and validate the Short Dark Tetrad (SD4) scale for use in the Indonesian context. Following established guidelines, a rigorous translation and adaptation process was conducted, involving forward translation, synthesis, back-translation, expert review, and pilot testing. Confirmatory Factor Analysis (CFA) with a sample of 258 Indonesian university students yielded acceptable model fit indices (GFI = .975, CFI = .81, RMSEA = .073, SRMR = .07), although the CFI was slightly below the recommended threshold. Reliability analysis using Omega coefficients indicated good internal consistency for the overall scale (ω = .806) and most subscales. The findings suggest that the Indonesian version of the SD4 is a promising tool for assessing dark personality traits in Indonesia, with potential for further refinement.

Keywords: Dark Tetrad, Cross-Cultural Adaptation, Personality, Confirmatory Factor Analysis

1 Introduction

The phenomenon of dark personality traits has received increasing attention in modern psychology due to its strong association with various social issues, such as antisocial behavior, manipulation, and exploitation[1]. Understanding this darker dimension of personality has important implications for both research and practice, particularly for formulating effective prevention and intervention strategies. In recent decades, personality psychology research has become increasingly interested in exploring the darker side of human personality, characterized by maladaptive traits[2], [3], [4]. The concept of "dark personality" initially focused on the Dark Triad, which consists of narcissism, Machiavellianism, and psychopathy[5]. Narcissism is characterized by a sense of superiority, a need for admiration, and a lack of empathy. Individuals with high narcissistic tendencies often exhibit exploitative behavior in interpersonal relationships and have a pronounced need for admiration and attention[6]. Machiavellianism refers to the tendency to manipulate and exploit others to achieve personal goals. Those with high Machiavellianism scores tend to view others as tools to achieve their aims and may readily

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employ deception or manipulation[7]. Psychopathy involves impulsivity, lack of remorse, and antisocial tendencies. As one dimension of the Dark Triad, psychopathy is characterized by a lack of empathy, impulsivity, and a tendency to violate social norms. Individuals with high psychopathy scores tend to exhibit manipulative, aggressive, and criminal behavior[8].

However, further research revealed another dark dimension not fully captured by the Dark Triad: sadism[9]. Sadism is defined as the pleasure derived from inflicting pain or seeing others suffer, both physically and psychologically[9]. Sadism differs from aggression in that its motivation is not merely to cause harm, but rather the enjoyment derived from the suffering of others[10]. The inclusion of sadism allows the Dark Tetrad concept to emerge as a more comprehensive framework for understanding the various manifestations of dark personality[9]). Although research on the Dark Tetrad has flourished in Western countries, similar research in Indonesia is currently scarce. Most existing studies employ instruments adapted from Western cultures without considering the nuances of Indonesian culture and language. However, cross-cultural research indicates that the manifestation and prevalence of dark personality traits can vary across cultures[11], [12]. For instance, a study by Church et al. (2018) found significant differences in the expression of narcissism between individualistic and collectivistic cultures. In individualistic cultures, narcissism tends to be manifested through seeking attention and self-recognition, while in collectivistic cultures, narcissism can be expressed through behavior that prioritizes group interest[13]. The limitations of Dark Tetrad research in Indonesia are also evident in the scarcity of valid and reliable measurement instruments in the Indonesian language. The Short Dark Tetrad (SD4) is a popular and efficient tool for measuring the Dark Tetrad, but to our knowledge, no study has specifically adapted the SD4 to the Indonesian language and cultural context.

Therefore, this study aims to address this gap by conducting the adaptation and validation of the SD4 on an Indonesian sample. This adaptation will involve the process of translation, back-translation, and pilot testing of the instrument to ensure equivalence of meaning and cultural relevance. Validation will be carried out through confirmatory factor analysis and reliability analysis to examine the factor structure and internal consistency of the measurement tool. This study is expected to make a significant contribution to the development of psychological research instruments in Indonesia. The results of this study will yield a valid and reliable measurement tool to assess the Dark Tetrad in the Indonesian population, enabling further research on the prevalence, influencing factors, and implications of dark personality in the Indonesian context. This validated Indonesian version of the SD4 will be a valuable resource for researchers and practitioners, facilitating the identification of individuals with Dark Tetrad tendencies in various settings, such as employee selection, counseling, and psychological intervention. This study is also expected to provide a more comprehensive understanding of the dark personality profile in Indonesian individuals, which ultimately can contribute to efforts to prevent and intervene in maladaptive behavior associated with dark personality traits.

2. Method

This study employed a cross-sectional design to examine the adaptation and validation of the Short Dark Tetrad (SD4) in the Indonesian population. Data were collected from a sample of participants at a single point in time.

2.1 Participants

Participants were Indonesian adults aged 18-40 years, with the ability to read and write in Indonesian. Individuals with severe psychological disorders or a history of substance abuse were excluded from the study. A convenience sampling technique was used, where participants were recruited through social media and the researchers' networks. This technique was chosen due to its ease of access and time efficiency.

2.2 Instrument

The Short Dark Tetrad [9] is a 28-item self-report measure with a 5-point Likert scale response format (1 = Strongly Disagree to 5 = Strongly Agree). The SD4 measures four dark personality dimensions: narcissism, Machiavellianism, psychopathy, and sadism.

The adaptation of the SD4 into Indonesian involved the following stages:

- **Translation:** The original English version of the SD4 was translated into Indonesian by a bilingual Indonesian psychologist with expertise in personality assessment.
- **Synthesis :**The original English version, the Indonesian translation, were compared and reviewed by the research team member with expertise in both English and Indonesian. This process aimed to identify and resolve any discrepancies in meaning, ensuring that the Indonesian translation accurately reflected the original while maintaining cultural appropriateness.
- **Back-translation:** An independent bilingual translator, blind to the original English version, translated the Indonesian version back into English.
- **Expert Review:** The original English version, the Indonesian translation, and the back-translated English version were reviewed by a panel of three experts (two psychologists and one linguist) to ensure semantic equivalence and cultural relevance. Discrepancies were discussed and resolved through consensus.
- **Pilot Testing:** The Indonesian version of the SD4 was pilot tested with a small sample (n = 34) of Indonesian adults to identify any potential issues with translation or item comprehension. Minor revisions were made based on the pilot study feedback.

2.3 Procedure

Data were collected online using the Google Form platform. Participants were recruited through social media by distributing the questionnaire link. Before completing the questionnaire, participants were provided with information regarding the study's objectives, the questionnaire completion procedure, and assurances of data confidentiality. Participants who agreed to participate were asked to provide online consent by checking a consent box.

2.4 Data Analysis

Data analysis was conducted using JASP version 0.19.2 software. Confirmatory factor analysis (CFA) was performed to examine the fit of the SD4 measurement model to the obtained data. Goodness-of-fit indices used to evaluate the model included the Comparative Fit Index (CFI),

Tucker-Lewis Index (TLI), Root Mean Square Error of Approximation (RMSEA), and Standardized Root Mean Square Residual (SRMR). The internal consistency of the scale was assessed using Cronbach's alpha.

3. Result and Discussion

3.1 Translation Process

This study adhered to the guidelines proposed by Beaton et.al[14] for the translation and cross-cultural adaptation of the Short Dark Tetrad (SD4) questionnaire into Indonesian. A rigorous process was undertaken to ensure equivalence between the Indonesian version and the original English version of the SD4. The translation procedure followed APA guidelines for instrument adaptation. Translation and Adaptation Procedure

To ensure the Indonesian version of the Short Dark Tetrad (SD4) questionnaire was equivalent to the original English version, a cross-cultural adaptation process was meticulously undertaken. The translation procedure adhered to established guidelines for instrument adaptation.

Forward Translation: Two proficient native Indonesian speakers independently translated the English version of the questionnaire into Indonesian. One translator was a Ph.D. candidate specializing in personality psychology, while the other was a Master's candidate at the University of Melbourne from a non-psychology background. This approach helped minimize potential bias and ensure clarity and accuracy. These independent translations were labeled "T1" and "T2."

Synthesis: After the initial translations, a discussion and meeting were conducted with the research team to combine the two versions ("T1" and "T2") into a unified questionnaire, coded "T12." This stage involved careful comparison of the two translations, discussion of any discrepancies, and selection of the most suitable wording for each item, considering both linguistic accuracy and cultural appropriateness.

Back Translation: Two translators who were lecturers from the English language department, fluent in English, back-translated the synthesized Indonesian version ("T12") into English. The back-translations resulted in two versions, "BT1" and "BT2," which were developed without consulting the original survey.

Expert Review: A committee was formed, consisting of the two authors and a translator with backgrounds in methodology, psychometrics, and linguistics, to compare the back-translations ("BT1" and "BT2") with the original SD4 questionnaire. To enhance comprehensibility and suitability for a wider audience, any translation errors were identified and corrected in the pre-final Indonesian version.

Pilot Testing: Forty-one psychology students evaluated the comprehensibility and clarity of the Indonesian version in a pilot study. They were asked to indicate any items that were unclear in their responses. The Indonesian version was then modified accordingly, and the Likert scale

was adjusted to include response options ranging from "Strongly Disagree" (1) to "Strongly Agree" (5).

3.2 Confirmatory Factor Analysis

Following the meticulous translation and adaptation procedures outlined above, we proceeded to the data collection phase of the study In this study, Data were collected online in July and August 2024 from 258 students at Universitas Negeri Padang, Indonesia. The mean age was 21.2 years, with 59% female participants. This sample provides insights into the characteristics of young adults in an Indonesian university setting

Construct validity was assessed using Confirmatory Factor Analysis (CFA). Data were collected from N = 258 participants who completed the distributed questionnaire. Prior to conducting the CFA, factor loadings for each item were evaluated. Items with factor loadings below 0.30 were eliminated from the model, as such scores indicate that the item does not contribute significantly to the construct being measured[15].

Table 1. Item Factor Loadings Following Elimination

						95% Confidence Interval	
Factor	Indicator	Estimate	Std. Error	z-value	p	Lower	Upper
Factor 1	M6	0.429	0.074	5.780	< .001	0.283	0.574
	M7	0.598	0.085	7.043	< .001	0.432	0.764
	M5	0.391	0.087	4.474	< .001	0.220	0.562
	M2	0.449	0.087	5.186	< .001	0.280	0.619
	M4	0.409	0.072	5.711	< .001	0.268	0.549
	M3	0.359	0.074	4.825	< .001	0.213	0.505
Factor 2	N1	0.630	0.060	10.521	< .001	0.513	0.748
	N2	0.614	0.059	10.372	< .001	0.498	0.730
	N3	0.630	0.056	11.290	< .001	0.521	0.739
	N4	0.772	0.060	12.833	< .001	0.654	0.890
	N5	0.582	0.055	10.590	< .001	0.474	0.689
	N6	0.512	0.065	7.934	< .001	0.386	0.639
Factor 3	P1	0.748	0.079	9.473	< .001	0.593	0.903
	P2	0.657	0.067	9.877	< .001	0.527	0.788
	P3	0.532	0.054	9.931	< .001	0.427	0.637
	P4	0.457	0.076	6.056	< .001	0.309	0.605
	P6	0.649	0.075	8.687	< .001	0.502	0.795
	P7	0.441	0.069	6.414	< .001	0.307	0.576
Factor 4	S1	0.749	0.064	11.680	< .001	0.623	0.875
	S2	0.864	0.065	13.316	< .001	0.736	0.991
	S3	0.658	0.061	10.703	< .001	0.537	0.778
	S4	0.722	0.058	12.553	< .001	0.610	0.835
	S5	0.738	0.074	10.032	< .001	0.594	0.883
	S7	0.726	0.084	8.678	< .001	0.562	0.890

Four items, one from each dimension, exhibited factor loadings below 0.30 and were subsequently removed to enhance the validity of the analysis and adhere to good psychometric

practice. This elimination process is crucial for refining the measurement model and ensuring that only items significantly reflecting the intended constructs are retained in the final analysis. Following item elimination, CFA was performed to evaluate model fit, employing various goodness-of-fit indices including the Goodness-of-Fit Index (GFI), Comparative Fit Index (CFI), Root Mean Square Error of Approximation (RMSEA), and Standardized Root Mean Square Residual (SRMR). 1 This process aligns with current best practices in confirmatory factor analysis, where poorly fitting items are removed to improve model accuracy. The CFA yielded the following goodness-of-fit indices: GFI = 0.975, CFI = 0.81, RMSEA = 0.073, and SRMR = 0.07. These values provide insights into the congruence between the measurement model and the observed data[15].

A GFI of 0.975 indicates an excellent fit between the model and the data. GFI values above 0.90 are generally considered to represent a good fit, suggesting that the model adequately accounts for the relationships among the observed variables [15]. The CFI of 0.81 falls slightly below the often-recommended threshold of 0.90. While not optimal, CFI values above 0.80 can be acceptable in certain contexts, particularly when dealing with complex data or multidimensional constructs. RMSEA of 0.073 suggests an adequate model fit. RMSEA values below 0.08 are typically considered to indicate a good fit, suggesting that the model provides a reasonable approximation of the underlying construct. SRMR of 0.07 also indicates a good fit. SRMR values below 0.08 are generally considered acceptable [16], further supporting the adequacy of the model. Overall, while the CFI is slightly lower than ideal, the results suggest that the measurement model demonstrates a reasonably good fit to the data.

3.3 Reliability Analysis

Reliability analysis using omega (ω) coefficients was conducted to assess the internal consistency of each factor within the Dark Tetrad scale. The overall scale demonstrated good reliability with an omega coefficient of 0.806, indicating that the items consistently measure the same latent construct [17]. However, reliability varied across the factors. Factors 2 and 4 exhibited excellent reliability (ω = 0.811 and 0.818, respectively), suggesting high internal consistency within these dimensions. Factor 1 showed moderate reliability (ω = 0.607), while Factor 3 demonstrated good reliability (ω = 0.721).

Table 2. Internal Consistency Reliability

Factor	Coefficient ω
Factor 1	.607
Factor 2	.811
Factor 3	.721
Factor 4	.818
Total	.806

4. Conclusion

The results of the CFA and reliability analyses indicate that the instrument demonstrates adequate model fit and good reliability for most of its factors. However, the first factor requires further refinement to improve its internal consistency. Overall, the instrument is deemed suitable

for further research, with some revisions recommended for the less reliable factor. The CFA results yielded several indicators of good model fit. The GFI of 0.975 indicates a strong fit, exceeding the minimum standard of 0.90. The CFI of 0.81 approaches the threshold for adequate fit, although slightly below the commonly used standard of 0.90. The RMSEA of 0.073 falls within the acceptable range, though closer to the upper limit of 0.08. The SRMR of 0.07 also falls within the acceptable range for model fit. Regarding reliability, the omega coefficients indicate that three of the four factors demonstrate good reliability, with ω values above 0.70: Factor 2 (ω = 0.811), Factor 3 (ω = 0.721), and Factor 4 (ω = 0.818). Factor 1 exhibited less satisfactory reliability, with an ω value of 0.607. The overall instrument omega of 0.806 suggests good internal consistency for the scale as a whole.

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