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Varieties of Sadistic Tendencies: adaptation and internal structure in Brazil

Varieties of Sadistic Tendencies: adaptação e estrutura interna no Brasil

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Abstract

Objective

This study aims to present an adaptation and evidence of construct validity of the Varieties of Sadistic Tendencies for a sample in the Brazilian context.

Method

To this end, 260 participants from different states, with ages ranging from 18 to 64 years ($M = 27.91$; $SD = 8.96$), answered three measurement instruments: (a) a version of the *Varieties of Sadistic Tendencies*, adapted to the Brazilian context through back translation; (b) the Dark Triad Dirty Dozen and; (c) a Demographic Questionnaire.

Results

The answers were submitted to Exploratory Factor Analysis using Factor v10.10.03, which indicated a bifactor structure with 16 items. In addition, Spearman's rho correlations were performed among the factors to identify evidence of validity with other variables, which indicated weak and moderate relationships.

Conclusion

As an initial study, the evidence of validity reported here points to psychometric adequacy.

Keywords: Machiavellianism; Narcissism; Psychopathy; Reproducibility of results; Sadism.

Resumo

Objetivo

O objetivo deste estudo é apresentar uma adaptação e evidências de validade de construto da *Varieties of Sadistic Tendencies* para uma amostra no contexto brasileiro.

Método

Para tanto, 260 participantes de diversos estados, com idades variando de 18 até 64 anos ($M = 27,91$; $DP = 8,96$), responderam três instrumentos de medida: (a) uma versão adaptada ao contexto brasileiro, por meio do procedimento de back translation, da *Varieties of Sadistic Tendencies*; (b) Dark Triad Dirty Dozen e; (c) Questionário Demográfico.

Resultados

As respostas foram submetidas à Análise Fatorial Exploratória por meio do Factor v10.10.03, que indicou uma estrutura bifatorial com 16 itens. Além disso, para identificar evidências de validade pela relação com outras variáveis, foram realizadas correlações rho de Spearman entre os fatores, as quais apontaram relações fracas e moderadas.

Conclusão

Como estudo inicial, as evidências de validades aqui reportadas apontam para a adequação psicométrica.

Palavras-chave: Maquiavelismo; Narcisismo; Psicopatia; Reprodutibilidade dos Testes; Sadismo.

Recently, psychology has sought to understand subclinical variants of personality traits previously considered solely pathological, such as Antisocial Personality Disorder (ASPD) (301.7/F60.2), Narcissistic Personality Disorder (301.81/F60.81), and Sexual Sadism Disorder (302.84/F65.52) (American Psychological Association [APA], 2014). Each of these disorders is investigated in their own subclinical variants: psychopathy, which involves high impulsivity, thrill-seeking, low empathy, and anxiety (Paulhus & Williams, 2002); narcissism, which includes high grandiosity, dominance, low empathy, sense of entitlement, and superiority – this facet of narcissism is part of the dark triad (Jonason & Webster, 2010); and sadism, which involves a range of behaviors associated with pleasure in inflicting or watching the suffering of others (Paulhus et al., 2011).

These three traits, along with Machiavellianism, are understood as a cluster of socially aversive personality traits named dark tetrad (Neumann et al., 2021; Paulhus & Buckels, 2011). Evidence on this cluster of traits indicates weak and moderate associations between aspects of these traits, indicating the existence of a “dark core” of personality. Sadism has shown associations with psychopathy ($r = 0.37$ / $r = 0.59$), narcissism ($r = 0.15$ / $r = 0.36$), and Machiavellianism ($r = 0.36$ / $r = 0.42$) (Bonfá-Araujo et al., 2022; Furnham & Horne, 2021).

In this context, the subclinical notion of these traits is associated with a common non-pathological pattern of behavior, affect, and cognition, i.e., that do not cause psychological distress and/or impairment in different aspects of an individual’s life (family, social, occupational) because they are manifested in a smaller magnitude or frequency (LeBreton et al., 2006). Thus, while the clinical manifestation of Sexual Sadism Disorder involves clinically significant suffering or impairment in social, occupational, or other important areas of an individual’s life (APA, 2014); sadism, understood as a subclinical variant, comprises a range of common behaviors that involve taking pleasure in causing or seeing the suffering of others (Paulhus et al., 2011). However, sadism has been studied mostly in association with sex offender behavior (Eher et al., 2016; Gonçalves et al., 2020) and sexual behavior (Kinrade et al., 2022; Longpré et al., 2019).

Most recently, the sadism trait has been researched for its influence on everyday behaviors (everyday sadism) (Buckels et al., 2013; Paulhus & Dutton, 2016). Such research has associated sadism with religious belief (Schofield et al., 2021) and preference for violent video games (Gonzalez & Greitemeyer, 2018). On the other hand, research on sadism has also highlighted its influence on conduct considered to be socially undesirable, such as vandalism for pleasure (Pfattheicher et al., 2019), cyber-troll behavior (Kircaburun et al., 2018; Sest & March, 2017), and propensity to lie in different contexts (Forsyth et al., 2021). In addition, sadism also shows evidence of association with conduct that is not illegal but can be perceived as unusual, such as family interference in romantic relationships with the intention of harming or dissolving the relationship (Collisson et al., 2021), preference for the practice of Bondage, Discipline, Domination, Submission, Sadism, and Masochism (BDSM) (Erickson & Sagarin, 2021), and fascination with weapons (Gonzalez & Greitemeyer, 2018).

In the Brazilian context, sadism, as a subclinical trait or everyday sadism, is still little studied. A brief search was conducted in the *Coordenação de Aperfeiçoamento de Pessoal de Nível Superior* (Capes) and Scientific Electronic Library Online (SciELO) databases using the term “sadism” until April 22, 2021. The search yielded 93 results, including 78 theses and dissertations and 15 journal articles. Of these results, only one thesis in the accounting field used the conception of everyday sadism to evaluate its influence on the involvement of CEOs in earnings management and fraud (Gois, 2017). The same happens with the articles published in journals, since only one of them used everyday sadism in the adaptation of the Comprehensive Assessment of Sadistic Tendencies (CAST) for the Brazilian context (Monteiro et al., 2020). All other studies addressed sexual sadism or sadism as a psychoanalytic concept.

One of the possible explanations for this scarcity of research on everyday sadism in the Brazilian context is the low availability of measures that assess this construct. Currently, the only instrument available and with adequate psychometric parameters for the Brazilian context is the CAST, which presented a single-factor structure and adequate internal consistency ($\omega = 0.92$ and $\alpha = 0.92$) (Monteiro et al., 2020). The CAST is composed of 16 items that assess the trait of sadism expressed verbally, physically, and vicariously (Buckels & Paulhus, 2014). As for the international context, in which everyday sadism is widely researched, there is a diversity of instruments available, such as the Short Sadistic Impulse Scale (SSIS) (O’Meara et al., 2011), the Assessment of Sadistic Personality (ASP) (Plouffe et al., 2017), the CAST (Buckels & Paulhus, 2014), and the Varieties of Sadistic Tendencies (VAST) (Paulhus et al., 2011).

The VAST is a measure composed of 16 items, developed through interviews with individuals from the general public, and assesses two aspects: (i) direct sadism, which comprises the feeling of pleasure in harming other people physically or verbally and; (ii) vicarious sadism, which corresponds to the pleasure in observing other people being harmed (Paulhus & Jones, 2015). In the international context, the VAST has adaptations for Serbia (Dinić et al., 2020) and Japan (Shimotsukasa & Oshio, 2016), the latter of which is not fully available in databases. In addition to validity evidence studies, the VAST has been employed in studies that sought to assess behaviors in the virtual world, such as trolling (Buckels et al., 2014), stalking (Chung & Sheridan, 2021), and pleasure in viewing violence in the media (Allen et al., 2022).

In this sense, the present study sought to present an alternative for evaluating everyday sadism in the Brazilian context. To this end, it aimed to adapt and present evidence of construct validity of the VAST, based on the internal structure and the relationship with other variables. Regarding the evidence based on the relationship with other variables, the traits that compose the dark triad, it is hypothesized that the traits of Machiavellianism, narcissism, and psychopathy will correlate positively with the VAST factors (vicarious sadism and direct sadism).

Method

Participants

The sample included 260 participants from different Brazilian states (Alagoas, Minas Gerais, Tocantins, Distrito Federal, Belo Horizonte, Pernambuco, Mato Grosso), aged between 18 and 64 years ($M = 27.91$; $SD = 8.96$). The majority were female (67.6%, $f = 225$), single 70.3% ($f = 234$), and had completed or were currently enrolled in higher education.

Instruments

To conduct the study, participants were required to answer three survey instruments, being:

Varieties of Sadistic Tendencies (VAST, Paulhus et al., 2011) – consisting of 16 items divided between two dimensions: vicarious sadism, with seven items (e.g., item 7 “I love the YouTube clips of people fighting”); and direct sadism, with nine items (e.g., item 11 “I enjoy hurting my partner during sex (or pretending to)”). The items are answered on a five-point scale ranging from 1 (Strongly Disagree) to 5 (Strongly Agree).

Dark Triad Dirty Dozen (DTDD, Jonason & Webster, 2010) – adapted and with validity evidence for the Brazilian context presented by Gouveia et al. (2016), formed by 12 items equally distributed in three traits: Machiavellianism ($\alpha = 0.85$), narcissism ($\alpha = 0.84$), and psychopathy ($\alpha = 0.72$), answered on a scale ranging from 1 (Strongly disagree) to 5 (Strongly agree).

Sociodemographic Questionnaire – with questions such as age, sex, and education.

Procedures

Initially, the project was submitted to the Brazilian Research Ethics Committee through the *Plataforma Brasil* system. After due approval (CAAE: 09453919.3.0000.5077398.042/2013), the application of the instruments was initiated by means of an electronic survey disclosed via e-mail and social networks. Initially, the participants were informed about the anonymity and confidentiality of their answers, and informed consent was obtained from all participants by electronically accepting an informed consent form. The voluntary nature of participation was also ensured, as well as respect for the ethical guidelines that govern research with human subjects, following Resolution n° 510 of April 7, 2016, which provides the standards applicable to research in human and social sciences.

For translating the VAST, the back/reverse translation method was adopted in the following steps: 1) translation of the instrument from English to Portuguese by three bilingual researchers trained in psychology; 2) synthesis of the three translated versions into Portuguese; 3) reverse translation of the Portuguese synthesized version into English (back translation) and; 4) evaluation of the equivalence of the items of the original instrument and the English synthesized version (back translation) by a committee formed by three translators who had no previous contact with the instrument. Thus, as no divergences were reported between the items of the original version of the VAST and the English synthetic version (back translation), the preliminary version of the VAST in Portuguese was composed.

Data Analysis

At first, descriptive statistics (frequency, percentage, mean, standard deviation, and 95% confidence interval) were used through the IBM®SPSS® software, version 24 to describe the sample profile regarding demographic data and mean scores on the scale factors. Subsequently, we sought to identify whether the data met the assumptions of the Exploratory Factor Analysis (EFA); multivariate normality did not. Thus, using the executable Factor v10.10.03, an EFA was performed using the polychoric correlation matrix, with the Robust Diagonally Weighted Least Squares (RDWLS) extraction method (Asparouhov & Muthen, 2010). A Parallel Analysis (Timmerman & Lorenzo-Seva, 2011) was performed to decide on the number of factors to be retained and the rotation used was Robust Promin (Lorenzo-Seva & Ferrando, 2019).

Model fit was assessed by the fit indices Root Mean Square Error of Approximation (RMSEA), Comparative Fit Index (CFI), and Tucker Lewis Index (TLI), which present as fit indicators values lower than 0.08 for RMSEA, and higher than 0.95 for CFI and TLI (Bandalos & Gerstner, 2016; Hu & Bentler, 1999). In addition, factor stability was assessed using the H-index, which assesses how well a set of items represent a common factor, with values greater than 0.80 being indicative of a well-defined and replicable latent variable (Ferrando & Lorenzo-Seva, 2018). For the reliability of the VAST factors, Cronbach's alpha coefficient (α) and the Composite Reliability (CR) index were used. Finally, to identify evidence of construct validity by the relationship with other variables, Spearman's rho correlations were performed.

Results

Initially, the factorability of the matrix was verified using the Kaiser-Meyer-Olkin (KMO) test, which proved to be acceptable (0.84), and Bartlett's test of sphericity ($\chi^2(120) = 1353.7; p = 0.000$). To identify the number of factors in the correlation matrix, we used the Kaiser-Guttman criterion, which indicated a two-factor model consistent with the theoretical structure, with eigenvalues of 7.18 and 1.56, and Horn's Parallel Analysis (PA), which also corroborated the two-factor model. The factor loadings of the items, in their respective factors, are presented in Table 1 along with Cronbach's alpha values and composite and H (H-Latent) reliability indices.

The EFA indicated that factor 1, responsible for 44.92% of the total variance, is composed of a total of seven items (01, 02, 03, 04, 05, 06, 07) with factor loadings ranging from 0.96 (item 01) to -0.45 (Item 06). The analysis of the semantics of the items of this factor indicates that these relate to the pleasure in watching other people being harmed, being called "Vicarious Sadism".

Table 1
Factor Loadings of the Items of the Varieties of Sadistic Tendencies

Items	Factors	
	F1	F2
01. In video games, I like the realistic blood spurts / <i>Nos vídeo games, eu gosto dos jatos de sangue realistas</i>	0.96	-0.13
02. I sometimes replay my favorite scenes from gory slasher films / <i>Eu as vezes dou replay nas minhas cenas favoritas de filmes sangrentos</i>	0.69	0.10
03. I enjoy watching cage fighting (or MMA), where there is no escape / <i>Eu aprecio assistir lutas em jaulas (ou MMA), onde não há escapatória</i>	0.80	-0.27
04. I sometimes look away in horror movies / <i>Eu as vezes desvio o olhar em filmes de horror</i>	-0.74	0.19
05. In car-racing, it's the accidents that I enjoy most / <i>Em corridas de carros, são os acidentes o que eu mais aprecio</i>	0.47	0.18
06. There's way too much violence in sports / <i>Há muita violência nos esportes</i>	-0.45	0.17
07. I love the YouTube clips of people fighting / <i>Eu amo os vídeos de YouTube de pessoas lutando</i>	0.78	0.11
08. I enjoy physically hurting people / <i>Eu aprecio machucar pessoas fisicamente</i>	0.09	0.77
09. I would never purposely humiliate someone / <i>Eu nunca humilharia alguém de propósito</i>	0.26	-0.44
10. I was purposely cruel to someone in high school / <i>Eu era cruel de propósito com alguém no ensino médio</i>	0.13	0.51
11. I enjoy hurting my partner during sex (or pretending to) / <i>Eu aprecio machucar meus parceiros durante o sexo (ou pretendo machucá-los)</i>	-0.01	0.70
12. I dominate others using fear / <i>Eu domino os outros usando o medo</i>	-0.01	0.83
13. I enjoy seeing people suffer / <i>Eu aprecio fazer pessoas sofrerem</i>	0.03	0.84
14. I enjoy mocking losers to their face / <i>Eu aprecio zombar de fracassados na cara deles</i>	-0.07	0.97
15. I never said mean things to my parents / <i>Eu nunca disse coisas más para meus pais</i>	0.07	-0.34
16. I enjoy tormenting animals – especially the nasty ones / <i>Eu aprecio atormentar animais – especialmente os nojentos</i>	0.09	0.67
Cronbach's Alpha	0.72	0.68
Composite Reliability	0.87	0.89
H-Latent	0.92	0.94
% total explained variance	54.73%	

Note: Factor loadings ≥ 0.30 are in black. F1: Vicarious Sadism; F2: Direct Sadism.

The second factor, responsible for 9.81% of the total variation, was composed of a total of nine items (08, 09, 10, 11, 12, 13, 14, 15, 16), with factor loadings ranging from 0.97 (item 14) to -0.34 (item 15). This factor, “Direct Sadism”, comprises items related to feeling pleasure in hurting other people physically or verbally. Regarding factor reliability, Cronbach’s alphas and composite reliability indices proved to be acceptable: Vicarious Sadism ($\alpha = 0.72$; CR = 0.87) and Direct Sadism ($\alpha = 0.68$; CR = 0.89) (Hair et al., 2009). Furthermore, the H-index indicated that the dimensions of the factor structure of the VAST are replicable in future studies ($H < 0.80$) (Ferrando & Lorenzo-Seva, 2018).

Finally, the fit indices showed that the two-factor structure of the VAST is adequate ($\chi^2 = 130.50$, $df = 89$; $p < 0.001$; RMSEA = 0.04; CFI = 0.98; TLI = 0.98).

After Spearman’s rho correlation analyses, the vicarious sadism factor showed weak associations with Machiavellianism ($\rho = 0.31$; $p < 0.01$), psychopathy ($\rho = 0.34$; $p < 0.01$), and narcissism ($\rho = 0.27$; $p < 0.01$). Whereas the direct sadism factor showed weak associations with Machiavellianism ($\rho = 0.33$; $p < 0.01$) and narcissism ($\rho = 0.18$; $p < 0.01$), and a moderate association with psychopathy ($\rho = 0.44$; $p < 0.01$).

Discussion

The present study aimed to adapt and gather evidence of construct validity of the VAST for a sample in the Brazilian context. Thus, it sought to present a measure for assessing sadism; specifically, the propensity to take pleasure in observing others being harmed (vicarious sadism) and the propensity to take pleasure in harming others physically or verbally (direct sadism), in order to enable the measurement of these characteristics in future research.

The result of the EFA indicated a two-factor model, being vicarious sadism (seven items) and direct sadism (nine items), in line with the original factor structure of the instrument (Paulhus & Jones, 2015). In this sense, the VAST psychometric properties found in this research can be considered satisfactory, with good internal consistency for the vicarious and direct sadism factors – similar to those found in other studies in different cultures (Dinić et al., 2020). In its adaptation for Serbia, the VAST also demonstrated a two-factor structure with adequate and better fit indices when compared to a one-factor structure (Dinić et al., 2020).

Also regarding the factor structure, the VAST items and the original dimensions were preserved (Paulhus & Jones, 2015); and the dimensions indicated to be replicable in future studies. In addition, the fit indicators of this model were adequate supporting a two-factor model. The cross-cultural replicability of the factor structure allows for the comparison of studies using the VAST to assess sadism. Moreover, the internal consistency of the VAST, indicated by means of Cronbach’s alpha coefficient and CR, was adequate for the dimensions (Valentini & Damásio, 2016).

However, it is important to highlight that item six “6. There’s way too much violence in sports” showed a negative factor loading, indicating that it would be inversely associated with sadism, which does not correspond to the semantics of the item. Similarly, in CAST, item 16 “There’s way too much violence in sports” was excluded for not presenting a factor loading < 0.30 (Monteiro et al., 2020). Here, a more parsimonious stance was adopted since the measured construct presents a tendency to response biases (Bonfá-Araújo & Hauck-Filho, 2021), and the present study did not explore the influence of Socially Desirable Responses (SDR) and acquiescent responses (Costa & Hauck-Filho, 2017). Thus, we opted for not excluding the item until such aspects are explored and new validity evidence is identified, being that without the exploration of these aspects the validity evidence of the instrument may be affected (Costa & Hauck-Filho, 2017; Krammer et al., 2017).

Validity evidence based on relationships with other variables that corroborate findings from other studies (Buckels, 2018; Plouffe et al., 2018) was also presented. This evidence indicates weak and moderate relationships between the dimensions of the VAST and the dimensions of the DTDD, indicating that the sadism trait shares characteristics with psychopathy, narcissism, and Machiavellianism. However, it is emphasized that these are different traits, which together can be understood as dark tetrad (Bonfá-Araujo et al., 2022; Neumann et al., 2021).

Regarding the pattern of association of sadism with the dark triad traits, the pattern already consolidated in the literature points to higher associations with psychopathy, Machiavellianism, and narcissism, respectively (Bonfá-Araujo et al., 2022). This same pattern was identified here for the two dimensions of the VAST, which reinforces the evidence of validity of this instrument in the Brazilian context.

Such evidence indicates that the VAST scores can perform a psychometrically adequate evaluation of the sadism trait. Thus, in theoretical terms, the instrument becomes an alternative that can help in the identification of individuals with a greater propensity for behaviors such as bullying, stalking, sexual harassment, and others that present the pleasure with cruelty as central. In comparison with the CAST, which in the Brazilian context evaluates sadism in a unifactorial way and understands the pleasure derived from cruelty as the centrality of sadism (Monteiro et al., 2020); the VAST understands that the pleasure derived from cruelty in sadism is divided into two aspects, one direct and the other vicarious. Thus, the VAST comprises a smaller number of items for a more comprehensive assessment of the aspects of sadism.

Furthermore, it is important to note that evidence points to sadism as a multidimensional construct (Buckels, 2018; Foulkes, 2019), and not unidimensional as pointed out by the CAST adaptation study (Monteiro et al., 2020). Also, despite that the study by Monteiro et al. (2020) reports the use of the Hull method for determining the number of dimensions, it fails to specify which of the Hull methods (Lorenzo-Seva et al., 2011) was employed, hindering a comprehensive analysis of the dimensional adequacy of the instrument.

The present research used a non-probability convenience sampling strategy, which does not allow for generalization of the findings. However, generalization is not the objective of this study. Another limitation that must be considered is the fact that the VAST is a self-report measure, which evaluates a trait expressed by socially undesirable behaviors, which may have caused uncontrolled biases, such as responses based on social desirability. Therefore, it is of great importance that new studies be conducted with more diverse samples, for a better calibration of the instrument and the adoption of some procedures to control for social desirability (Hauck-Filho & Valentini, 2019). In this context, the present research is a first step that expands possibilities by providing validity evidence of the VAST for the Brazilian context.

It is also understood that the results reported here should be interpreted with parsimony, and that it is mandatory to obtain evidence of validity through other strategies. Thus, since this was the first study that sought to adapt and investigate evidence of the validity of the VAST in Brazil, it is understood that the structure presented and its reliability is adequate, but other studies may add greater contributions in the analysis of its internal structure. Finally, it is suggested that the factor structure be assessed using Confirmatory Factor Analysis (CFA) and that the item parameters be assessed using Item Response Theory (IRT). Furthermore, future studies may establish standards for a better interpretation of the results.

References

- Allen, J. J., Ash, S. M., & Anderson, C. A. (2022). Who finds media violence funny? Testing the effects of media violence exposure and dark personality traits. *Psychology of Popular Media*, 11(1), 35-46. <https://doi.org/10.1037/ppm0000296>
- American Psychological Association (2014). *Manual Diagnóstico e Estatístico de Transtornos Mentais* (5th. ed.). Artmed.
- Asparouhov, T., & Muthén, B. (2010). Simple second order chi-square correction. *Mplus Technical Appendix*, 1-8.
- Bandalos, D. L., & Gerstner, J. J. (2016). Using factor analysis in test construction. In: K. Schweizer & C. DiStefano (Eds.), *Principles and methods of test construction* (pp. 23-51). Hogrefe.
- Bonfá-Araujo, B., & Hauck-Filho, N. (2021). "All or nothing". *Psico*, 52(1), e35441-e35441. <https://doi.org/10.15448/1980-8623.2021.1.35441>
- Bonfá-Araujo, B., Lima-Costa, A. R., Hauck-Filho, N., & Jonason, P. K. (2022). Considering sadism in the shadow of the Dark Triad traits: A meta-analytic review of the Dark Tetrad. *Personality and Individual Differences*, 197, 111767. <https://doi.org/10.1016/j.paid.2022.111767>
- Buckels, E. E. (2018). *The psychology of everyday sadism* [Doctoral thesis, University of British Columbia]. UBC Theses and Dissertations. <https://open.library.ubc.ca/ciRcle/collections/ubctheses/24/items/1.0369056>
- Buckels, E. E., & Paulhus, D. L. (2014). *Comprehensive Assessment of Sadistic Tendencies* (CAST) [Unpublished instrument]. University of British Columbia.
- Buckels, E. E., Jones, D. N., & Paulhus, D. L. (2013). Behavioral Confirmation of Everyday Sadism. *Psychological Science*, 24(11), 2201-2209. <https://doi.org/10.1177/0956797613490749>
- Buckels, E. E., Trapnell, P. D., & Paulhus, D. L. (2014). Trolls just want to have fun. *Personality and Individual Differences*, 67, 97-102. <https://doi.org/10.1016/j.paid.2014.01.016>
- Chung, K. L., & Sheridan, L. (2021). Perceptions of stalking in Malaysia and England: The influence of perpetrator-target prior relationship and personality. *Personality and Individual Differences*, 182, 111064. <https://doi.org/10.1016/j.paid.2021.111064>
- Collisson, B., Howell, J. L., & Monleon, J. (2021). Meddling friends and family: Dark Tetrad traits predict interference in disliked couples' romantic relationships. *Journal of Social and Personal Relationships*, 38(7), 2008-2028. <https://doi.org/10.1177/02654075211001127>
- Costa, A. R. L., & Hauck-Filho, N. (2017). Menos desejabilidade social é mais desejável: neutralização de instrumentos avaliativos de personalidade. *Interação em psicologia*, 21(3), 239-249. <https://doi.org/10.5380/psi.v21i3.53054>
- Dinić, B. M., Bulut Allred, T., Petrović, B., & Wertag, A. (2020). A test of three sadism measures: Short Sadistic Impulse Scale, Varieties of Sadistic Tendencies, and Assessment of Sadistic Personality. *Journal of Individual Differences*, 41(4), 219-227. <https://doi.org/10.1027/1614-0001/a000319>
- Eher, R., Schilling, F., Hansmann, B., Pumberger, T., Nitschke, J., Habermeyer, E., & Mokros, A. (2016). Sadism and Violent Reoffending in Sexual Offenders. *Sexual Abuse*, 28(1), 46-72. <https://doi.org/10.1177/1079063214566715>
- Erickson, J. M., & Sagarin, B. J. (2021). The prosocial sadist? A comparison of BDSM sadism and everyday sadism. *Personality and Individual Differences*, 176, 110-723. <https://doi.org/10.1016/j.paid.2021.110723>
- Ferrando, P. J., & Lorenzo-Seva U. (2018). Assessing the quality and appropriateness of factor solutions and factor score estimates in exploratory item factor analysis. *Educational and Psychological Measurement*, 78, 762-780. <https://doi.org/10.1177/0013164417719308>
- Forsyth, L., Anglim, J., March, E., & Bilobrk, B. (2021). Dark Tetrad personality traits and the propensity to lie across multiple contexts. *Personality and Individual Differences*, 177, 110-792. <https://doi.org/10.1016/j.paid.2021.110792>
- Foulkes, L. (2019). Sadism: Review of an elusive construct. *Personality and Individual Differences*, 151, 109500. <https://doi.org/10.1016/j.paid.2019.07.010>

- Furnham, A., & Horne, G. (2021). The Tetradic Heart of Darkness: Comparing three dark-side instruments. *Personality and Individual Differences, 179*, 110-918. <https://doi.org/10.1016/j.paid.2021.110918>
- Gois, A. D. (2017). *The dark tetrad of personality and the accounting information quality: The moderating effect of corporate reputation* [Doctoral thesis, Universidade de São Paulo]. Plataforma Sucupira. https://sucupira.capes.gov.br/sucupira/public/consultas/coleta/trabalhoConclusao/viewTrabalhoConclusao.jsf?popup=true&id_trabalho=5810516
- Gonçalves, L. C., Rossegger, A., Gerth, J., Singh, J. P., & Endrass, J. (2020). Sexual Sadism Among Sex Offenders in Switzerland. *Sexual Abuse, 32*(1), 79-100. <https://doi.org/10.1177/1079063218800473>
- Gonzalez, J. M., & Greitemeyer, T. (2018). The relationship between everyday sadism, violent video game play, and fascination with weapons. *Personality and Individual Differences, 124*, 51-53. <https://doi.org/10.1016/j.paid.2017.11.045>
- Gouveia, V. V., Monteiro, R. P., Gouveia, R. S. V., Athayde, R. A. A., & Cavalcanti, T. M. (2016). Avaliando o lado sombrio da personalidade: Evidências psicométricas do Dark Triad Dirty Dozen. *Interamerican Journal of Psychology, 50*, 420-432.
- Hair, J. F., Black, W. C., Babin, B. J., Anderson, R. E., & Tatham, R. L. (2009). *Análise multivariada de dados*. Bookman.
- Hauck-Filho, N., & Valentini, F. (2019). O controle da desejabilidade social no autorrelato usando quádruplas de itens. *Avaliação Psicológica, 18*(3), 1-3. <https://dx.doi.org/10.15689/ap.2019.1803.ed>
- Hu, L.-T., & Bentler, P. M. (1999). Cutoff criteria for fit indexes in covariance structure analysis: Conventional criteria versus new alternatives. *Structural Equation Modeling, 6*, 1-55. <https://doi.org/10.1080/10705519909540118>
- Jonason, P. K., & Webster, G. D. (2010). The Dirty Dozen: A concise measure of the dark triad. *Psychological Assessment, 22*, 420-432. <https://dx.doi.org/10.1037/a0019265>
- Kinrade, C., Hart, W., & Lambert, J. T. (2022). Sadistic responses to inciting nonsexual vs. sexual pain: Evidence for distinctions between everyday and sexual sadism. *Personality and Individual Differences, 199*, 111-866. <https://doi.org/10.1016/j.paid.2022.111866>
- Kircaburun, K., Jonason, P. K., & Griffiths, M. D. (2018). The Dark Tetrad traits and problematic social media use: The mediating role of cyberbullying and cyberstalking. *Personality and Individual Differences, 135*, 264-269. <https://doi.org/10.1016/j.paid.2018.07.034>
- Krammer, G., Sommer, M., & Arendasy, M. E. (2017). The psychometric costs of applicants' faking: Examining measurement invariance and retest correlations across response conditions. *Journal of Personality Assessment, 99*(5), 510-523. <https://doi.org/10.1080/00223891.2017.1285781>
- LeBreton, J. M., Binning, J. F., & Adorno, A. J. (2006). Subclinical psychopaths. In J. C. Thomas & D. Segal (Eds.), *Comprehensive Handbook of Personality and Psychopathology* (pp. 388-411). John Wiley & Sons.
- Longpré, N., Guay, J.-P., & Knight, R. A. (2019). MTC Sadism Scale: Toward a dimensional assessment of severe sexual sadism with behavioral markers. *Assessment, 26*(1), 70-84. <https://doi.org/10.1177/1073191117737377>
- Lorenzo-Seva, U., & Ferrando, P. J. (2019). Robust Promin: A method for diagonally weighted factor rotation. *Revista Peruana de Psicología, 25*(1), 99-106. <https://doi.org/10.24265/liberabit.2019.v25n1.08>
- Lorenzo-Seva, U., Timmerman, M. E., & Kiers, H. A. (2011). The Hull method for selecting the number of common factors. *Multivariate Behavioral Research, 46*, 340-364. <https://doi.org/10.1080/00273171.2011.564527>
- Monteiro, R. P., Medeiros, E. D., Silva, C. L., Melo, I. M., Figueiredo, F. A. D., & Belmonte, D. B. (2020). Propriedades Psicométricas Da Comprehensive Assessment of Sadistic Tendencies (CAST) no Brasil. *Psico-USF, 25*(4), 725-736. <https://doi.org/10.1590/1413/82712020250411>
- Neumann, C. S., Jones, D. N., & Paulhus, D. L. (2021). Examining the Short Dark Tetrad (SD4) Across Models, Correlates, and Gender. *Assessment, 29*(4), 651-667. <https://doi.org/10.1177/1073191120986624>
- O'Meara, A., Davies, J., & Hammond, S. (2011). The psychometric properties and utility of the Short Sadistic Impulse Scale (SSIS). *Psychological Assessment, 23*, 523-531. <https://doi.org/10.1037/a0022400>

- Paulhus, D. L., & Buckels, E. E. (2011). The dark tetrad of personality. In V. Zeigler-Hill & T. K. Shackelford (Eds.), *Encyclopedia of Personality and Individual Differences* (pp. 1004-1009). Springer, Cham.
- Paulhus, D. L. & Jones, D. N. (2015). Measures of dark personalities. In: G. J. Boyle, D. H. Saklofske, & G. Matthews (Eds.), *Measures of personality and social psychological constructs* (pp. 562-594). Academic Press.
- Paulhus, D. L., & Dutton, D. G. (2016). *Sadismo cotidiano*. In: V. Zeigler-Hill & D. K. Marcus (Eds.), *O lado escuro da personalidade: ciência e prática em psicologia social, personalidade e clínica* (pp. 109-120). Associação Americana de Psicologia. <https://doi.org/10.1037/14854-006>
- Paulhus, D. L., & Williams, K. M. (2002). The Dark Triad of personality: Narcissism, Machiavellianism, and psychopathy. *Journal of Research in Personality*, 36, 556-563. [https://doi.org/10.1016/S0092-6566\(02\)00505-6](https://doi.org/10.1016/S0092-6566(02)00505-6)
- Paulhus, D. L., Jones, D. N., Dutton, D. G., & Klonsky, E. D. (2011). *Sadistic personality and its everyday correlates* [Unpublished manuscript]. University of British Columbia.
- Pfattheicher, S., Keller, J., & Knezevic, G. (2019). Destroying things for pleasure: On the relation of sadism and vandalism. *Personality and Individual Differences*, 140, 52-56. <https://doi.org/10.1016/j.paid.2018.03.049>
- Plouffe, R. A., Saklofske, D. H., & Smith, M. M. (2017). The assessment of sadistic personality: Preliminary psychometric evidence for a new measure. *Personality and Individual Differences*, 104, 166-171. <https://doi.org/10.1016/j.paid.2016.07.043>
- Plouffe, R. A., Smith, M. M., & Saklofske, D. H. (2018). A psychometric investigation of the Assessment of Sadistic Personality. *Personality and Individual Differences*, 140, 57-60. <https://doi.org/10.1016/j.paid.2018.01.002>
- Schofield, M. B., Roberts, B. L. H., Harvey, C. A., Baker, I. S., & Crouch, G. (2021). Tales from the dark side: The dark tetrad of personality, supernatural, and scientific belief. *Journal of Humanistic Psychology*, 62(2), 298-315. <https://doi.org/10.1177/00221678211000621>
- Sest, N., & March, E. (2017). Constructing the cyber-troll: Psychopathy, sadism, and empathy. *Personality and Individual Differences*, 119, 69-72. <https://doi.org/10.1016/j.paid.2017.06.038>
- Shimotsukasa, T., & Oshio, A. (2016, December). *Development of a Japanese version of the Varieties of Sadistic Tendencies (VAST-J): Factor structure and relationship with HEXACO* [Poster presentation]. 25th Annual Meeting of the Japan Society of Personality Psychology, Osaka.
- Timmerman, M. E., & Lorenzo-Seva, U. (2011). Dimensionality Assessment of Ordered Polytomous Items with Parallel Analysis. *Psychological Methods*, 16, 209-220. <https://doi.org/10.1037/a0023353>
- Valentini, F., & Damásio, B. F. (2016). Variância média extraída e confiabilidade composta: indicadores de precisão. *Psicologia: Teoria e Pesquisa*, 32(2). <https://doi.org/10.1590/0102-3772e322225>

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