

Assessing ITR Parameters of The Varieties of Sadistic Tendencies Items

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Abstract

This study aimed to estimate the item parameters of the Varieties of Sadistic Tendencies (VAST) through Item Response Theory (IRT) using Samejima's Graded Response Model. Hence, 396 participants of both sexes, aged 26.93 (SD=8.91) on average, were included. The participants completed the (1) Varieties of Sadistic Tendencies and a (2) Sociodemographic questionnaire. Confirmatory Factor Analysis (CFA) was performed, which identified a two-dimensional model with appropriate goodness of fit indicators (CFI= .97; TLI= .97; RMSEA= .04). Thus, the item parameters were calculated for each dimension separately. The results indicated that the dimension items showed good discrimination, information breadth, and a good range of response thresholds. The conclusion is that the item parameters of VAST provide information that allows a better interpretation of its scores.

Keywords: sadism, item response theory, dark tetrad, validity, reliability

AVALIAÇÃO DOS PARÂMETROS DOS ITENS DA VARIETIES OF SADISTIC TENDENCIES VIA TRI

Resumo

O presente estudo teve como objetivo estimar os parâmetros dos itens da *Varieties of Sadistic Tendencies* (VAST) por meio da Teoria de Resposta ao Item (TRI), utilizando o Modelo de Resposta Graduada de Samejima. Para tanto, contou-se com 396 participantes, de ambos os sexos, com média de idade de 26.93 (DP = 8.91). Os participantes responderam aos seguintes instrumentos: (1) *Varieties of Sadistic Tendencies* e (2) Questionário sociodemográfico. Inicialmente foi realizada uma Análise Fatorial Confirmatória (AFC) que identificou um modelo de duas dimensões com indicadores de ajuste adequados (CFI= 0.97; TLI= 0.97; RMSEA= 0.04). Desse modo, os parâmetros dos itens foram calculados para cada dimensão separadamente. Os resultados indicaram que os itens das dimensões mostraram uma boa discriminação, amplitude de informação e uma boa variação dos limiares de resposta. Diante dos resultados conclui-se que os parâmetros dos itens da VAST fornecem informações para melhores interpretações dos seus escores.

Palavras-chave: sadismo, teoria de resposta ao item, dark tetrad, validade, confiabilidade

EVALUACIÓN DE LOS PARÁMETROS DEL VARIETIES OF SADISTIC TENDENCIES

Resumen

Este estudio tuvo por objetivo evaluar los parámetros del *Varieties of Sadistic Tendencies* (VAST) a través de la Teoría de Respuesta al Ítem (TRI), específicamente usando el Modelo de Respuesta Graduada de Samejima. Para este propósito, fueron incluidos 396 participantes de los dos sexos, con una media de edad de 26.93 años (DE = 8.91). Los participantes respondieron a los siguientes instrumentos: (1) *Varieties of Sadistic Tendencies* y (2) cuestionario sociodemográfico. Inicialmente, el Factor de Análisis Confirmatorio (FAC) fue realizado, el que identificó un modelo bidimensional con indicadores adecuadamente ajustados (CFI= .97; TLI= .97; RMSEA= .04). Así, los parámetros fueron calculados para cada dimensión separadamente. Los resultados indicaron que la dimensión ítems mostró buena discriminación, amplitud de información y un buen rango de umbrales de respuesta. Considerando estos resultados, se concluyó que los parámetros de los ítems del VAST suministran información para mejor interpretar sus puntajes.

Palabras-clave: sadismo, respuesta al ítem, tétrada oscura, validez, fiabilidad

The *dark triad* groups three socially aversive personality traits: Machiavellianism, which denotes low empathy and an ability for manipulation; Psychopathy, characterized by low empathy, high impulsivity, and sensation seeking; and Narcissism, which encompasses a grandiose sense of self-importance, low empathy, and a sense of entitlement and superiority (Jonason & Webster, 2010; Paulhus et al., 2011; Paulhus & Williams, 2002). However, new evidence shows that a fourth undesirable personality trait should be included: Everyday Sadism, characterized by the pleasure derived from others' suffering (Paulhus, 2014). Therefore, a new cluster emerged with the inclusion of sadism and is now conventionally called *dark tetrad*, though it does not replace the previous cluster (Chabrol et al., 2009; Neumann et al., 2021; Paulhus & Buckels, 2011).

In dark tetrad, two traits – psychopathy and narcissism – are considered subclinical variants, respectively, of Antisocial Personality Disorder (APD) (301.7/F60.2) and narcissistic personality disorder (301.81/F60.81) (American Psychological Association [APA], 2014). In this context, differentiating between clinical and subclinical aspects is vital because such characteristics exist to a greater or lesser extent among individuals without any diagnosis, i.e., individuals presenting an adaptive pattern of such traits.

Like Machiavellianism, everyday sadism appears distinct from sexual sadism and sadism found in forensic samples (Foulkes, 2019). Furthermore, the international literature refers to everyday sadism to describe an individual's propensity to take pleasure in seeing or causing suffering in others through behaviors that are not illegal or are on the frontier of illegality in various contexts (Buckels et al., 2013; Foulkes, 2019). Thus, the evidence available at an international level indicates associations between higher levels of daily sadism and more frequent mistreatment in the workplace (Min et al., 2019), a preference for playing violent video games (Greitemeyer, 2015; Greitemeyer & Sagioglou, 2017), a greater desire for having the control in romantic relationships (Hughes & Samuels, 2020) and the problematic use of social networks for behaviors such as cyberbullying and cyberstalking (Kircaburun et al., 2018).

There are several measures in the international context presenting validity evidence for assessing everyday sadism, such as the Short Sadistic Impulse Scale (SSIS – O'Meara et al., 2011), the Assessment of Sadistic Personality (ASP – Plouffe et al., 2017), the Comprehensive Assessment of Sadistic Tendencies (CAST – Buckels & Paulhus, 2014), and the Varieties of Sadistic Tendencies (VAST – Paulhus et al., 2011). From this perspective, several instruments were developed to assess everyday sadism, which boosted the development of studies exploring this trait in non-clinical and non-forensic samples. Nonetheless, some instruments do not report all psychometric properties or present significant variations in the definition of everyday sadism and its operationalization (Foulkes, 2019).

There are only two measures in the Brazilian context with adequate psychometric parameters to assess this construct, possibly explaining the scarcity of Brazilian studies exploring sadism. One of the measures available in Brazil is the Comprehensive Assessment of Sadistic Tendencies (CAST). Initially developed by Buckels (2018), this measure presented three

dimensions indicating the assessment of verbal, physical, and vicarious sadism ($\chi^2 = 352.70$, $df = 130.50$; $p < 0.001$; $RMSEA = 0.06$, $CFI = 0.93$); although a single-factor structure was reported for CAST, in Brazil. Note that the study's authors did not report this model's goodness of fit or which of the Hull methods was adopted, hindering its replication (Monteiro et al., 2020). Thus, CAST is the only measure that presents physical and verbal sadism as distinct dimensions, but it lacks empirical support in the Brazilian context.

The other measure available to assess everyday sadism, and the object of this study, is the Varieties of Sadistic Tendencies (VAST – Paulhus et al., 2011). VAST was developed through interviews held with individuals from the general population. It comprises 16 items grouped into two dimensions: (1) direct sadism, which concerns pleasure derived from physically or verbally harming people, and (2) vicarious sadism, which corresponds to pleasure in watching other people being harmed (Paulhus & Jones, 2015). This measure was adapted for Serbia (Dinić et al., 2020) and Japan (Shimotsukasa & Oshio, 2016), although the latter is not available in scientific databases. In the Brazilian context, VAST presented validity evidence of a two-factor structure ($\chi^2=130.50$, $df = 89$; $p < 0.001$; $RMSEA = 0.04$; $CFI = 0.98$; $TLI = 0.98$) and adequate internal consistency: vicarious sadism presented a Cronbach's alpha (α) equal to 0.72 and composite reliability (CR) equal to 0.87; and direct sadism with α equal to 0.68 and CR equal to 0.89 (Esteves et al., 2024).

The availability of valid and reliable measures facilitates the exploration of psychological constructs, allowing the operationalization of psychological theories. Furthermore, valid evidence and adequate information about such measures enable researchers to identify the robustness and the amount of information that can be extracted from these measures. Therefore, one statistical technique that better extracts information about an instrument is Item Response Theory (IRT). Compared to the Classical Test Theory – CTT (Andrade et al., 2019), IRT presents some practical advantages, adding information about the parameters and items' information curves (Andrade et al., 2010; Andrade et al., 2021; Embretson & Reise, 2000; Peres et al., 2019). Therefore, this study aims to estimate the parameters of the VAST items through IRT, specifically using Samejima's Graded Response Model (Samejima, 1969).

Method

Participants

A non-probabilistic convenience sample was adopted, i.e., the individuals who were invited and agreed to participate comprised 396 participants from different Brazilian states (AL, MG, GO, TO, DF, BH, PE, MT), aged from 18 to 65 years old (Mean = 26.93; SD = 8.91); most were women, 66.1% ($f = 262$) and single, 69.4% ($f = 275$). Data were collected from January to November 2021.

Instruments

The participants were asked to answer two research instruments:

- (1) Varieties of Sadistic Tendencies (VAST) was developed by Paulhus et al. (2011) and presented validity evidence for the Brazilian context (Esteves et al., 2024). It consists of 16 items distributed into two dimensions: vicarious sadism (e.g., item 7, “*Eu amo os vídeos de Youtube de pessoas lutando*” [I love YouTube clips of people fighting]) composed of seven items; and direct sadism (e.g., item 13 “*Eu aprecio machucar meus parceiros durante o sexo (ou pretendo machucá-los)*” [I enjoy hurting my partner during sex (or pretending to)]), consisting of nine items. The items are rated on a five-point scale ranging from 1 (Strongly disagree) to 5 (Strongly agree).
- (2) Sociodemographic Questionnaire: addressing age, sex, marital status, and education to characterize the sample.

Procedures

The Institutional Review Board first submitted and approved the project via the Brasil platform (CAAE: 09453919.3.0000.5077398.042/2013). The instruments were applied using an electronic questionnaire sent via email and social networks. The participants were ensured anonymity and confidentiality of information and signed free and informed consent forms.

Data Analysis

JASP (v. 0.13.0.0) and R (v. 4.0.2) were used in data analysis. Descriptive statistics (frequency, percentage, mean, standard deviation, and 95% confidence interval) were initially verified using JASP (v. 0.13.0.0) to describe the sample’s demographic profile. JASP (v. 0.13.0.0) was also adopted to perform Confirmatory Factor Analysis (CFA) using the Unweighted Least Squares (ULS) estimation method. The following goodness fit indicators were considered to compare the two-factor and one-factor models: Comparative Fit Index (CFI), Tucker Lewis Index (TLI), and Root Mean Square Error of Approximation (RMSEA). Such indices present goodness of fit above 0.95 and 0.95 and below 0.08 (Bandalos & Gerstner, 2016; Hu & Bentler, 1999). Cronbach’s alpha coefficient (α) and the Composite Reliability Index (CR) were used to verify the factors’ reliability. Next, we estimated the item parameters using Item Response Theory (IRT), with R (v. 4.0.2), via the *mirt* package. Specifically, the Graded Response Model (Samejima, 1969) was used.

Results

CFA was performed to compare the two-dimensional with a one-dimensional model, using the ULS estimation method to meet the IRT’s unidimensionality assumption (Peres et al., 2019). This analysis was conducted by inverting items 4, 6, and 9 because these assess everyday sadism in the opposite direction (Esteves et al., 2024). Thus, the two-dimensional model presented the following goodness of fit indicators with evidence of psychometric adequacy:

CFI = 0.97, TLI = 0.97, and RMSEA (90%CI) = 0.04 (0.03 – 0.06). Factor loadings obtained a mean of 0.69 (SD = 0.02), ranging from 0.30 (Item 09: “Eu nunca humilharia alguém de propósito” [I would never purposely humiliate someone]) to 0.89 (Item 01: “Nos vídeo games, eu gosto dos jatos de sangue realistas” [In video games, I like the realistic blood spurts]). The results are presented in Table 1. On the contrary, the goodness of fit indices of the one-dimension model was unsatisfactory: CFI = 0.93, TLI = 0.92, and RMSEA (90% CI) = 0.08 (0.07 – 0.08). In both CFAs, item 15 (“Eu nunca disse coisas más para meus pais” [I never said mean things to my parents]) was removed because it had a factorial load lower than 0.30 (–0.26).

Furthermore, reliability analyses indicated that the dimensions of vicarious sadism ($\alpha = 0.72$; CR = 0.85) and direct sadism ($\alpha = 0.63$; CR = 0.72) obtained satisfactory indices, corroborating the two-dimension interpretation of VAST. Thus, in line with these results, the item parameters under IRT were estimated separately for each dimension.

Table 1

Description of Lambdas, Parameters, and Amount of Item Information

	λ	a	b_{-4}	b_{-2}	b_{+2}	b_{+4}	I (θ ; -3/+3)
<i>Vicarious Sadism</i>							28.09
Item 1	0.89	2.59	0.69	0.97	1.38	1.87	5.13
Item 2	0.64	2.43	1.10	1.40	1.79	2.23	4.59
Item 3	0.69	2.38	0.78	1.15	1.62	2.33	5.15
Item 4	0.84	1.26	-0.60	-0.03	0.60	1.14	2.18
Item 5	0.36	1.41	1.36	2.02	2.91	3.34	2.68
Item 6	0.40	0.65	-3.14	-2.06	-0.13	1.46	1.27
Item 7	0.81	2.96	0.58	1.07	1.59	2.08	7.06
<i>Direct Sadism</i>							35.50
Item 8	0.53	2.29	1.23	1.73	2.16	2.79	4.88
Item 9	0.30	0.32	-0.93	0.29	1.58	3.08	0.41
Item 10	0.73	1.62	0.80	1.40	1.99	2.47	3.06
Item 11	0.53	1.57	0.99	1.58	2.17	2.90	3.09
Item 12	0.56	2.79	0.81	1.48	2.06	2.82	7.46
Item 13	0.50	2.67	1.19	1.83	2.45	2.80	6.23
Item 14	0.45	2.94	1.30	1.75	2.26	2.73	6.75
Item 16	0.35	1.91	1.57	2.17	2.80	3.00	3.58

Note. λ – lambda; a – discrimination parameter; b_{-4} – difficulty threshold parameter; I (θ ; -3/+3) – information in the interval θ from -3 a +3.

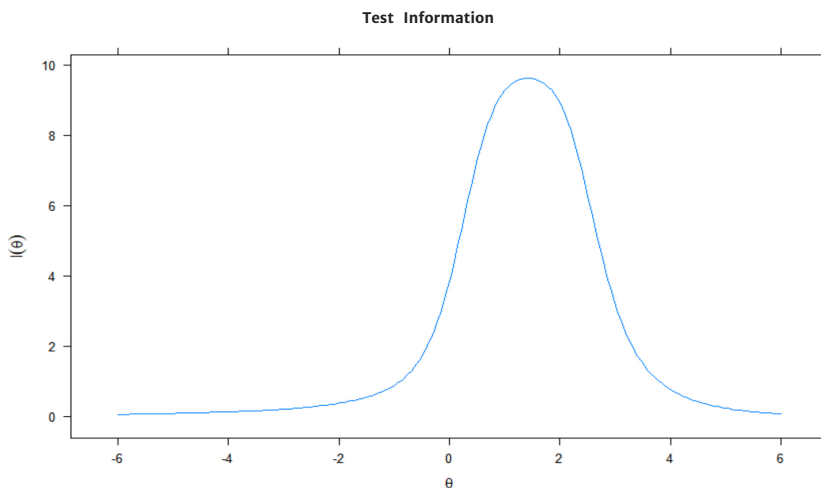
Considering the one-dimensional evidence of the vicarious and direct sadism dimensions, the item parameters were estimated using the Gradual Response Model, described in Table 1. For the items in the vicarious sadism dimension, the mean discrimination was 1.91 (SD = 0.30). In

descending order, items 7, 1, 2, and 3 presented discrimination greater than 2.0, indicating a high discrimination capacity, followed by items 5 and 4, with discrimination between 1.0 and 2.0. Item 6, on the other hand, presented discrimination below 1.0, indicating that this item has the lowest capacity to differentiate people depending on the level of vicarious sadism. Overall, this dimension presented 28.09 of information, with item 7 (“Eu amo os vídeos de *Youtube* de pessoas lutando” [I love YouTube clips of people fighting]) providing the highest amount of information for the dimension [$I(\theta; -3/+3) = 7.06$]. Item 6 (“Há muita violência nos esportes” [There is way too much violence in sports]) was the one that provided the least amount of information for the dimension [$I(\theta; -3/+3) = 1.27$]. Figure 1 shows the vicarious sadism dimension covers a theta (θ) range between -1.5 and 4.0.

Regarding the difficulty parameter, the items in the vicarious sadism dimension presented a mean θ of 2.06 (SD= 0.70) to be endorsed at the highest point of the response scale. In this dimension, item 5 (“Em corrida de carros, são os acidentes o que eu mais aprecio” [In car racing, it is the accidents that I enjoy most]) was the one that required a higher amount of the measured trait to endorse the highest point on the response scale ($b_4 = 3.34$). On the other hand, item 4 (“Eu às vezes desvio o olhar em filmes de horror” [I sometimes look away in horror movies]) was the one that required the smallest amount of the measured trait to endorse the highest point on the response scale ($b_4 = 1.14$).

Figure 1

Information curve of the vicarious sadism dimension



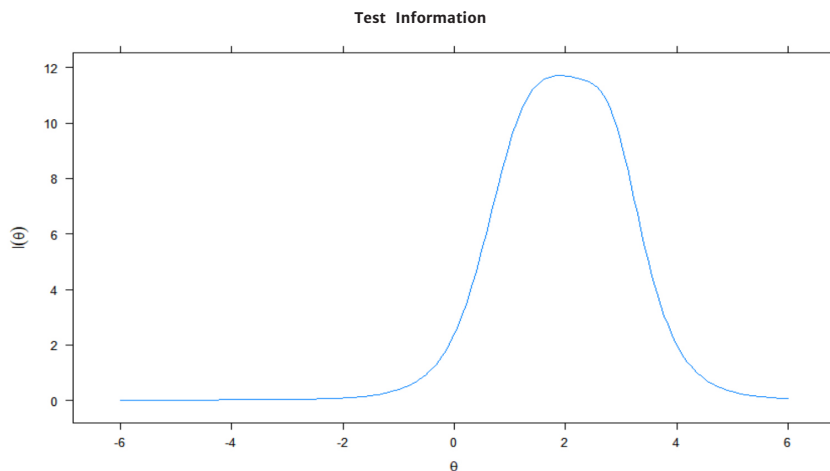
The mean discrimination for items in the direct sadism dimension was 2.01 (SD = 0.86). In descending order, items 14, 12, 13, and 8 presented discrimination higher than 2.0, indicating a high discrimination capacity, followed by items 16, 10, and 11, with discrimination between 1.0

and 2.0. Item 9, on the other hand, presented discrimination below 1.0, indicating that this item has less ability to differentiate people depending on the level of direct sadism. In general, this dimension presented 35.50 information, with item 12 (“Eu domino os outros usando o medo” [I can dominate others using fear]) providing the highest amount of information for the dimension [$I(\theta; -3/+3) = 7.46$]. Item 9 (“Eu nunca humilharia alguém de propósito” [I would never purposely humiliate someone]) was the one providing the least amount of information for the dimension [$I(\theta; -3/+3) = 0.41$]. Additionally, Figure 2 shows that the direct sadism dimension covers a range of θ between 0 and 4.

Regarding the difficulty parameter, the items in the direct sadism dimension presented a mean θ of 2.82 (SD= 0.18) to be endorsed at the highest point of the response scale. In this dimension, item 9 (“Eu nunca humilharia alguém de propósito” [I would never purposely humiliate someone]) was the one that required a more significant amount of the measured trait to endorse the highest point on the response scale ($b_4 = 3.08$). On the other hand, item 10 (“Eu era cruel de propósito com alguém no ensino médio” [I was purposely cruel to someone in high school]) was the one that required the smallest amount of the measured trait to endorse the highest point on the response scale ($b_4 = 2.47$).

Figure 2

Information curve of the direct sadism dimension



Discussion

This study aimed to estimate the parameters of the Varieties of Sadistic Tendencies (VAST) items through Item Response Theory (IRT) using the Graded Response Model. This objective was achieved, reinforcing VAST's psychometric properties.

In this context, CFA showed evidence of a two-dimensional factor structure, which corroborates previous studies (Paulhus et al., 2011; Esteves et al., 2024). However, in this analysis, item 15 was excluded due to the low factor loading presented (<0.30), which may have occurred due to the participants' difficulty understanding the item's wording. Additionally, the reliability of the measurement was assessed using CR and α , indicating acceptable levels (Hair et al., 2009; Nunnally, 1991).

Regarding the item parameters, most VAST items showed high discrimination capacity (Baker, 2001), indicating that they can appropriately differentiate among respondents according to the latent trait level. However, items 6 ("Há muita violência nos esportes" [There is way too much violence in sports]; parameter $a = 0.65$) and 9 ("Eu nunca humilharia alguém de propósito" [I would never purposely humiliate someone]; parameter $= 0.32$) respectively presented moderate and low discrimination rates (Baker, 2001). These low discrimination rates indicate that the behaviors expressed in these items may not be adequate to differentiate levels of everyday sadism in the Brazilian context. Moderate discrimination indices are also found in items 9 (parameter $a=0.92$) and 16 (parameter $a=0.94$) in the study of the item parameters of CAST, which is a more comprehensive version of VAST (Monteiro et al., 2020). However, the study's authors assessing CAST item parameters did not make the instrument items available, restricting comparisons of these items' semantics.

Regarding the difficulty parameter, compared to the direct sadism items, the vicarious sadism items required a lower level of latent trait to be endorsed at the highest point of the response scale ("Descreve-me muito bem" [Describes me very well]). In this dimension, the item with the highest level of difficulty was item 5 ("Em corridas de carros, são os acidentes o que eu mais aprecio" [In car racing, it's the accidents that I enjoy most]), indicating a need for a higher level of latent trait to mark the highest point on the scale. Regarding the direct sadism dimension, the items required a higher level of latent trait to be endorsed at the highest point of the response scale, with item 10 being the most difficult ("Eu era cruel de propósito com alguém no ensino médio" [I was purposely cruel to someone in high school]). In this sense, by observing the information curves of the dimensions, VAST presents a more accurate assessment of moderate and high levels of the trait of everyday sadism. Comparatively, VAST presents a scope of evaluation of everyday sadism similar to CAST (Monteiro et al., 2020).

In the Brazilian context, few studies used the assessment of the everyday sadism trait, possibly due to the low availability of psychometrically appropriate measures for the Brazilian context. Hence, the evidence reported here is relevant in this context, as it is the second measure with adequate psychometric parameters. The other measure available for the Brazilian context is CAST, originally composed of three dimensions: physical sadism, verbal sadism, and vicarious sadism (Buckels, 2018). As previously explained, a one-dimensional factor structure was found in the Brazilian context, suggesting that the central aspect of sadism concerns pleasure derived from cruelty and that the CAST dimensions differentiate contexts rather than psychological characteristics (Monteiro et al., 2020). However, no goodness of fit indices were presented for

this model. On the contrary, the evidence presented here, obtained through robust analyses, indicates that the trait of sadism may not be one-dimensional, which is corroborated by other studies (Buckels, 2018; Esteves, 2024; Paulhus et al., 2011). Thus, the benefits of using the VAST for everyday sadism include assessing different aspects of this trait and the presence of inverted items to facilitate controlling for acquiescence (Valentini & Hauck-Filho, 2020).

The evidence shows an instrument with psychometric properties suitable for the Brazilian context. Hence, further studies investigating antecedents of socially undesirable and cruel behaviors (e.g., domestic violence, violent sexual behavior) are expected to investigate everyday sadism as a potential explanation for these behaviors. Additionally, note that this is the first study using IRT to assess VAST in the Brazilian context, and despite its contributions, there are also some limitations. Even though not part of this study's objective, generalization is hindered due to the sampling procedure adopted here. Additionally, we did not control for social desirability.

Finally, further research is expected to deepen and refine the measure proposed here through new validity and reliability evidence. Future studies can explore the relationship between VAST and CAST (Monteiro et al., 2020), their relationships with instruments that measure the dark triad's components (Jonason & Webster, 2010; Jones & Paulhus, 2014), and behavioral markers (Longpré et al., 2019). Bandeira et al. (2021) noted that measurement specifically expands the nomological networks of the constructs of interest. Adequate measurement of the everyday sadism construct will favor its understanding in psychological research.

References

- Andrade, J. M., Esteves, G. G. L., & Laros, J. A. (2019). Teoria clássica dos testes (TCT). In M. N. Baptista, M. Muniz, C. T. Reppold, C. H. S. S. Nunes, L. F. Carvalho, R. Primi, A. P. P. Noronha, A. G. Seabra, S. M. Weschsler, C. S. Hutz, & L. Pasquali (Orgs.), *Compêndio de Avaliação Psicológica* (pp. 40–52). Editora Vozes.
- Andrade, J. M., Laros, J. A., & Gouveia, V. V. (2010). O uso da teoria de resposta ao item em avaliações educacionais: Diretrizes para pesquisadores. *Avaliação Psicológica*, 9(3), 421–435.
- Andrade, J. M., Laros, J. A. & Lima, K. S. (2021). Teoria de resposta ao item paramétrica e não paramétrica. In C. Faiad, M. N., Baptista, & R. Primi (Orgs.), *Tutoriais em análise de dados aplicados à Psicometria* (pp. 183–204). Editora Vozes.
- Baker, F. B. (2001). *The basics of item response theory*. ERIC Clearinghouse on Assessment and Evaluation. <http://files.eric.ed.gov/fulltext/ED458219.pdf>
- 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.
- Bandeira, D. R., Andrade, J. M., & Peixoto, E. M. (2021). O uso de testes psicológicos: Formação, avaliação e critérios de restrição. *Psicologia: Ciência e Profissão*, 41(spe1). <https://doi.org/10.1590/1982-3703003252970>
- Buckels, E. E. (2018). *The psychology of everyday sadism* [PhD Dissertation, The University of British Columbia]. <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, Vancouver, Canada.
- 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>
- 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*. <https://doi.org/10.1027/1614-0001/a000319>
- Embretson, S. E., & Reise, E. P. (2000). *Item response theory for psychologists*. Lawrence Erlbaum Associates Publishers.
- Esteves, G. G. L., Oliveira, L. V. B., & Melo, M. B. (2024). Varieties of Sadistic Tendencies: Adaptation and internal structure in Brazil. *Estudos de Psicologia (Campinas)*, 41, e210076. <https://doi.org/10.1590/1982-0275202441e210076>
- 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>
- Greitemeyer, T. (2015). Everyday sadism predicts violent video game preferences. *Personality and Individual Differences*, 75, 19–23. <https://doi.org/10.1016/j.paid.2014.10.049>
- Greitemeyer, T., & Sagioglou, C. (2017). The longitudinal relationship between everyday sadism and the amount of violent video game play. *Personality and Individual Differences*, 104, 238–242. <https://doi.org/10.1016/j.paid.2016.08.021>
- Hair, J. F., Black, W. C., Babin, B. J., Anderson, R. E., & Tatham, R. L. (2009). *Análise multivariada de dados*. Bookman.
- 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.
- Hughes, S., & Samuels, H. (2020). *Dark desires: The Dark Tetrad and relationship control*. *Personality and Individual Differences*, 110548. <https://doi.org/10.1016/j.paid.2020.110548>
- Jonason, P. K., & Webster, G. D. (2010). The dirty dozen: A concise measure of the dark triad. *Psychological Assessment*, 22, 420–432. <https://doi.org/10.1037/a0019265>
- Jones, D. N., & Paulhus, D. L. (2014). Introducing the short Dark Triad (SD3): A brief measure of dark personality traits. *Assessment*, 21(1), 28–41. <https://doi.org/10.1177/1073191113514105>

- 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>
- 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>
- Min, H., Pavisic, I., Howald, N., Highhouse, S., & Zickar, M. J. (2019). A Systematic Comparison of Three Sadism Measures and Their Ability to Explain Workplace Mistreatment Over and Above the Dark Triad. *Journal of Research in Personality*, 82, 103862. <https://doi.org/10.1016/j.jrp.2019.103862>
- Monteiro, R. P., Medeiros, E. D. D., Silva, C. L. D., Melo, I. M. D., Figueiredo, F. A. D., & Dorileo, B. 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>
- Nunnally, J. C. (1991). *Teoría psicométrica*. Trillas.
- 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. (2014). Toward a taxonomy of dark personalities. *Current Directions in Psychological Science*, 23(6), 421–426. <https://doi.org/10.1177/0963721414547737>
- Paulhus, D. L., & Dutton, D. G. (2016). Everyday sadism. In V. Zeigler–Hill & D. K. Marcus (Eds.), *The dark side of personality: Science and practice in social, personality, and clinical psychology* (pp. 109–120). American Psychological Association. <https://doi.org/10.1037/14854-006>
- 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, Vancouver, Canada.
- 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., & 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)
- Peres, A. J. S., Lessa, J. P. A., & Valentini, F. (2019). Teoria de resposta ao item (TRI). In M. N. Baptista, M. Muniz, C. T. Reppold, C. H. S. da S. Nunes, L. F. Carvalho, R. Primi, A. P. P. Noronha, A. G. Seabra, S. M. Weschsler, C. S. Hutz, & L. Pasquali (Orgs.), *Compêndio de Avaliação Psicológica* (pp. 53–68). Editora Vozes.
- 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. <https://doi.org/10.1016/j.paid.2016.07.043>
- Samejima, F. (1969). Estimation of latent ability using a response pattern of graded scores. *Psychometrika*, 35(1), 100–139.
- Shimotsukasa, T., & Oshio, A. (2016). *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, Kansai University, Suita, Japan.
- Valentini, F., & Hauck Filho, N. (2020). O impacto da aquiescência na estimação de coeficientes de validade. *Avaliação Psicológica*, 19(1), 1–3. <https://dx.doi.org/10.15689/ap.2020.1901.e0>

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