

BRIEF REPORT

How Spiteful Are We? Validation of the Spitefulness Scale in Spaniards

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ABSTRACT

Spitefulness has been defined as the willingness to cause some kind of harm to other people, even if this action does not bring any benefit and causes harm to herself. Given its relationship with a multitude of antisocial behaviors, interest in studying this trait has been growing and it was in 2014 when the first scale to measure it was validated: the Spitefulness Scale. This study aimed to examine the psychometric properties of its Spanish version. In a sample of 758 participants ($M = 31.44$; $SD = 12.91$; 72.80% female), the Spitefulness Scale, the Short Dark Triad, the Assessment of Sadistic Personality, the HEXACO-60, and the Global Assessment of Internet Trolling were administered. Results showed the unidimensionality of the scale, adequate reliability indices, and construct validity, evidenced by positive relationships with the Dark Tetrad traits and trolling behavior. Additionally, the analysis revealed significant gender differences, with males scoring higher on spitefulness. This Spanish validation allows us to establish a solid basis for cross-cultural comparisons. Understanding this trait, considered like the Dark Tetrad traits an antagonistic personality trait, has important implications for understanding the interpersonal and social dynamics. Given that spitefulness is closely related to aggressive behaviors, it is essential to study it to understand the underlying mechanisms of aggression and hostility in social interactions.

1 | Introduction

Spitefulness has been defined as the willingness to cause some kind of harm to other people, even if this action does not bring any benefit to the person responsible for the grudging behavior, and even if this causes harm to him or herself. Thus, spitefulness entails a cost for the individual, who renounces his own benefits to harm other people (Kimbrough and Reiss 2012; Rogier et al. 2021; Zeigler-Hill and Noser 2018). However, it was not until 2014 that the first scale aimed at the direct measurement of this personality trait was validated (Marcus et al. 2014). From this moment on, interest in the study of this trait increased (e.g., Moyer et al. 2017; Rodgers and Dahling 2018; Rogier, Marzo, and Velotti 2019; Zeigler-Hill et al. 2015).

Since the study of personality leads to a better understanding of human behavior, it seems necessary to further study this construct and analyze its relationship with specific behaviors and motivations in contexts of social interactions and personal relationships, as well as with other personality traits (Farstad, McGeown, and von Ranson 2016; Fassino et al. 2013; Huang et al. 2017). In this sense, although the spiteful personality trait has not been represented within any personality model (Marcus et al. 2014), several studies have analyzed its relationship with the main general personality models, such as with the HEXACO model (Ghalebi Gajivand 2020; Kircaburun et al. 2021b, 2022; Kiziloglu et al. 2024; Lima-Costa et al. 2022; Vrabel, Zeigler-Hill, and Shango 2017). This model studies personality based on the dimensions of honesty-humility,

emotionality, extraversion, agreeableness, conscientiousness, and openness to experience (Ashton and Lee 2007).

Overall, spitefulness appears to be negatively related to all general traits of the HEXACO model (Lima-Costa et al. 2022; Marcus et al. 2014; Vrabel, Zeigler-Hill, and Shango 2017; Zeigler-Hill et al. 2015). These findings are along the lines that spiteful people show a lower capacity to understand the thoughts and feelings of others, that is, they seem to have a low level of empathy, which leads to a lower concern for aspects such as honesty, fair behavior, and moral values. Thus, spiteful people do not care about avoiding harming others, show low levels of guilt about the harm inflicted, and disregard for their reputation and even if this means causing some kind of harm to themselves. In this sense, these behaviors show that spiteful people have socially antagonistic and aggressive behaviors (Lima-Costa et al. 2022; Marcus et al. 2014; Vrabel, Zeigler-Hill, and Shango 2017; Zeigler-Hill et al. 2015).

On the other hand, previous studies have analyzed its relationship with personality traits considered more malevolent or socially unacceptable, given the aforementioned characteristics and the fact that, like these traits, it is related to a wide variety of aggressive behaviors, such as aggressive humor and self-destructive humor, the manifestation of violence, bullying and trolling, among others (e.g., Hardaker 2010; Kubiszewski et al. 2014; Lawrence 2024; Marcus et al. 2014; Rogier, Marzo, and Velotti 2019; Soldatova, Rasskazova, and Chigarkova 2022; Vrabel, Zeigler-Hill, and Shango 2017). In this sense, the set of malevolent traits that has received the most attention in recent years is the Dark Tetrad (Chabrol et al. 2009; Paulhus and Williams 2002), formed by narcissism, Machiavellianism, psychopathy, and sadism. In general terms, narcissism is characterized by idealization of oneself and presenting feelings of grandiosity; Machiavellianism involves manipulative and immoral behaviors; psychopathy alludes to an antisocial personality, with impulsive and aggressive behaviors; and sadism involves taking pleasure in humiliating others or imposing control over others (Bonfá-Araujo et al. 2022; Chabrol et al. 2009; Jones and Paulhus 2014; Paulhus and Williams 2002).

Given the similarities between spitefulness and the Dark Tetrad personality traits, some authors went so far as to consider their inclusion in this set of traits and form a quintet of malevolent traits (Kircaburun et al. 2021a, 2021b; Kircaburun and Griffiths 2018; Kiziloglu et al. 2024; Rogier et al. 2021). However, it is worth noting the particularity of the concept, because, as explained, spiteful actions involve harming oneself, which differentiates spite from the aforementioned terms (Kimbrough and Reiss 2012; Marcus et al. 2014; Rogier et al. 2021; Zeigler-Hill and Noser 2018). Even so, spitefulness has come to be considered an antagonistic trait and its relationship to Dark Tetrad traits has been analyzed since, like Dark Tetrad traits, spitefulness is related to manipulative behaviors, impulsivity, aggressiveness, and lack of empathy, as well as a predisposition to harm others (Marcus et al. 2014; Marcus and Zeigler-Hill 2015; Vrabel, Zeigler-Hill, and Shango 2017; Zeigler-Hill et al. 2015). In addition, just as men score higher on the Dark Tetrad traits (Chabrol, Bouvet, and Goutaudier 2017; Neumann, Jones, and Paulhus 2022; Pineda et al. 2022), gender differences are also observed in relation to spitefulness scores, with men

generally more likely to display spiteful behaviors (Lima-Costa et al. 2022; Marcus et al. 2014).

1.1 | The Present Study

Given the aforementioned characteristics of spitefulness and its relation to a wide variety of violent behaviors, in recent years this concept has been investigated in greater depth, which has led to the construction of a scale for its measurement, the Spitefulness Scale (Marcus et al. 2014), as well as its subsequent validation in other languages for further investigation in the world population, such as Italian (Rogier et al. 2021), Brazilian Portuguese (Lima-Costa et al. 2022), and Turkish (Yılmaz 2019). These versions of the scale measure spitefulness using 12–14 items, have a one-dimensional factor structure and good internal consistency, with reliability indices (α) of 0.83 and 0.85 in the case of the Italian version and 0.94 in the case of the Brazilian-Portuguese and Turkish versions. This has made it possible to examine spitefulness at a global level and to carry out cross-cultural comparisons (Beckstead, Yang, and Lengacher 2008; Berry et al. 1992; Hui and Traindis 1985; Prince 2008). Therefore, it is of great interest to adapt this instrument to Spanish, to facilitate the study of spitefulness in Spanish speakers and to extend the research to a larger number of countries.

Therefore, the main objective of the present study was to explore the following psychometric properties of the Spanish version of the Spitefulness Scale: (1) the theoretical factor structure as a single- or multifactorial construct; (2) internal consistency; (3) construct validity, analyzing its relationship with general personality traits (based on the HEXACO model), antagonistic personality traits (Dark Tetrad) and violent behavior (trolling was selected as a violent variable); and (4) variability expressed by gender differences, considering that previous studies indicate that men score higher than women (e.g., Jonason and Zeigler-Hill 2018; Lima-Costa et al. 2022; Marcus et al. 2014; Rodgers and Dahling 2018).

According to previous literature, we expect to obtain a Spanish version of the scale with adequate psychometric properties, both in terms of reliability (H_1) and validity (H_2). Specifically, in terms of validity, we expect to find negative relationships with general personality traits and positive relationships with antagonistic traits and with the selected antisocial variable. We also expect to find statistically significant differences between men and women (H_3).

2 | Methods

2.1 | Participants and Procedure

With a minimum required size of 200 participants to perform the validation analysis (Kline 2011), the final sample of this study consisted of 758 participants, of which 72.80% were female. The mean age was 31.44 (SD = 12.91), with ages ranging from 18 to 80 years.

The sample was selected by convenience sampling and collecting data. The survey was disseminated with all the scales of interest through different social networks and spaces, such as Facebook and Internet forums. Participants gave informed

consent to participate, and the study obtained the approval of the Ethics Committee of the Miguel Hernandez University of Elche (Reference DPS.JPR.04.16).

2.2 | Measures

2.2.1 | Self-Report Spitefulness Scale

The Spitefulness Scale (Marcus et al. 2014) is a 17-item instrument designed to measure the willingness to harm other people, even if it involves harming oneself. Participants respond on a 5-point Likert-type scale, ranging from 1 (*strongly disagree*) to 5 (*strongly agree*). This scale has shown adequate psychometric properties, obtaining a Cronbach's alpha (α) of 0.89.

2.2.2 | Short Dark Triad

The Short Dark Triad (SD3) scale (Jones and Paulhus 2014) comprises 27 items designed to assess the three antagonistic traits that make up the Dark Triad: narcissism, Machiavellianism, and psychopathy. Each dimension is assessed by nine items, with responses recorded on a 5-point Likert-type scale ranging from 0 (*strongly disagree*) to 4 (*strongly agree*). The Spanish version of the scale showed satisfactory internal consistency metrics: an α coefficient of 0.61 for narcissism, 0.73 for Machiavellianism, and 0.68 for psychopathy (Pineda, Sandín, and Muris 2020).

2.2.3 | Assessment of Sadistic Personality

The Assessment of Sadistic Personality (ASP) scale (Plouffe, Saklofske, and Smith 2017) is a concise self-report consisting of nine items aimed at assessing sadistic tendencies, thereby complementing the SD3 for a comprehensive evaluation of the Dark Tetrad. Respondents rate their agreement with each item on a 5-point Likert-type scale, ranging from 0 (*strongly disagree*) to 4 (*strongly agree*). Its Spanish version has demonstrated satisfactory reliability indices, with an α coefficient of 0.75 (Pineda et al. 2023).

2.2.4 | HEXACO-60

The HEXACO-60 (Ashton and Lee 2009) is a brief 60-item inventory that assesses personality based on the dimensions of the HEXACO model: Honesty-Humility, Emotionality, Extraversion, Agreeableness, Conscientiousness, and Openness to experience. Each of the subscales consists of 10 items with a 5-point Likert-type scale ranging from 1 (*strongly disagree*) to 5 (*strongly agree*). The Spanish version reported high reliability based on internal consistency indices (α) above 0.70 in all dimensions (Roncero, Fornés, and Belloch 2013).

2.2.5 | Global Assessment of Internet Trolling

The Global Assessment of Internet Trolling (GAIT) (Buckels, Trapnell, and Paulhus 2014) consists of four items that assess

trolling behavior (malicious online behavior) identification and enjoyment. Participants responded to a 5-point Likert-type scale, ranging from 1 (*strongly disagree*) to 5 (*strongly agree*). Its Spanish version has a satisfactory reliability with an α coefficient of 0.76 (Navarro-Carrillo, Torres-Marín, and Carretero-Dios 2021).

2.3 | Data Analysis

Confirmatory factor analysis (CFA) was conducted using Diagonally Weighted Least Squares to ensure accurate estimation of factor loadings for ordinal data (Likert scales) (Jöreskog and Sörbom 1996; Muthén and Muthén 1998–2017). The variance of the first factor was set to 1 to identify the model, and no error terms were correlated as the model showed an adequate fit without the need for these modifications. Model fit was assessed based on several fit indices, including a significant ($p < 0.05$) chi-square (χ^2) value, a Normalized Fit Index (NFI) exceeding 0.90, a Comparative Fit Index (CFI) of 0.95 or higher, a Goodness of Fit Statistic (GFI) of 0.90 or greater, a Standardized Root Mean Residual (SRMR) value of 0.05 or lower, and a Root Mean Square Error Approximation (RMSEA) value of 0.08 or lower (Hu and Bentler 1999; Kline 2011). Descriptive statistics (scores of the scales obtained as a sum), Pearson's bivariate correlations, and reliability indices were then performed. Gender differences were analyzed, calculating Welch's t -test and Cohen's d to obtain the effect size. In addition, to obtain the fit indices to analyze the factorial invariance across genders, the values of χ^2 , CFI, GFI, RMSEA, SRMR, and degrees of freedom (df) were considered. R statistical program (R Core Team, version 4.3.0; Lavaan library version 0.6.17) was used to perform all analyses.

3 | Results and Discussion

3.1 | CFA of the Spanish Spitefulness Scale and Its Reliability

With two fewer items (i.e., 15) than the original version (i.e., 17; Marcus et al. 2014), the CFA showed a good fit in the factor structure of the Spanish version of the scale: $\chi^2 = 160.781$, $DF = 90$, $p < 0.001$. Although the chi-square test is significant, which may indicate a lack of perfect fit, it is well known that this test is highly sensitive to large sample sizes (e.g., Cheung and Rensvold 2002; Kline 2011). Therefore, other fit indices that are less affected by sample size, such as the CFI, GFI, RMSEA, and SRMR, are more informative in this context. The model displayed a good fit according to these indices: $NFI = 0.969$, $GFI = 0.990$, $CFI = 0.986$, $SRMR = 0.055$, $RMSEA = 0.032$ (Table S1). These results indicate a well-fitting model and support the factorial structure of the Spanish version of the Spitefulness Scale.

It is well known that the combination of positive and inverse items can present advantages, such as the control of acquiescence, but it can also contribute to the appearance of measurement problems, such as in reliability or factorial variations of the scales (Suárez-Álvarez et al. 2018; Weijters and

Baumgartner 2012). In our validation, it was considered appropriate to eliminate the two inverse items (items 3 and 14) for having extremely low factor loadings. In fact, in the Italian and Portuguese validation of the scale, the authors also offer the possibility of eliminating these two items, in addition to item 2, for the same reasons as we do (Lima-Costa et al. 2022; Rogier et al. 2021). It is important to consider that linguistic factors may influence how items are interpreted and responded to by participants, which could contribute to variations in performance across different cultural contexts (Beckstead, Yang, and Lengacher 2008; Berry et al. 1992; Hui and Traindis 1985; Prince 2008).

Nevertheless, although we did not convert the same number of items as the original version, the unidimensionality and psychometric properties obtained in our validation imply that the structure and content of the scale remain invariant across cultures and linguistic contexts (e.g., Garofalo, Rogier, and Velotti 2017; Lima-Costa et al. 2022; Marcus et al. 2014; Rogier et al. 2021; Yilmaz 2019). This uniformity facilitates cross-cultural comparison of the levels of spite among different populations, allowing investigations that address the variability and similarities in the manifestation of this construct at a global level. In this sense, the consistency in the scale structure among the different versions validated at the international level provides a solid basis for the extrapolation of results and the generalization of findings in future studies that address cross-cultural aspects of spitefulness (Beckstead, Yang, and Lengacher 2008; Berry et al. 1992; Hui and Traindis 1985; Prince 2008).

In addition, adequate internal consistency indices were obtained ($\alpha = 0.88$; $\omega = 0.89$), guaranteeing the accurate measurement of the construct (Table S2). Therefore, H_1 was confirmed, supporting the suitability of the adapted scale.

3.2 | Construct Validity

Regarding the scale's validity, spiteful showed adequate criterion validity, showing the expected associations with other related constructs (H_2 was confirmed; Table S2). In this sense, negative correlations ($p < 0.05$; $p < 0.01$) were obtained with the six major personality traits, that is, honesty-humility, emotionality, extraversion, agreeableness, conscientiousness, and openness to experience (Garofalo et al. 2019; Lima-Costa et al. 2022; Marcus et al. 2014; Vrabel, Zeigler-Hill, and Shango 2017). These results would indicate that more spiteful people are less honest and humble, less extroverted, and show less kindness, responsibility, and openness to experience. However, the relationships observed between spitefulness and openness or emotionality ($r = -0.09$, $r = -0.10$) were weaker, indicating that these constructs are conceptually more distant from each other than other major dimensions, such as agreeableness or honesty-humility, which are conceptually closer to spitefulness.

Furthermore, positive and strong relationships were obtained with the four Dark Tetrad traits and with trolling behavior. In the case of the four antagonistic traits, given that both these and spite are related to a multitude of violent behaviors, a strong

relationship between them was to be expected (positive correlations of greater magnitude in the case of Machiavellianism, psychopathy, and sadism; $p < 0.01$) (Garofalo, Rogier, and Velotti 2017; Hardaker 2010; Kubiszewski et al. 2014; Lawrence 2024; Lima-Costa et al. 2022; Marcus et al. 2014; Rogier et al. Marzo, and Velotti 2019, 2021; Soldatova, Rasskazova, and Chigarkova 2022; Vrabel, Zeigler-Hill, and Shango 2017). In fact, as pointed out in the introduction, several authors have come to consider spite as one more of this set of antagonistic or malevolent traits, given the similarities in their conceptualization (Kircaburun et al. 2021a, 2021b; Kircaburun and Griffiths 2018; Kiziloglu et al. 2024). In this sense, spitefulness was related to a stronger magnitude of association with Machiavellianism, psychopathy, and sadism, reinforcing the idea that a more spiteful person will show less empathy, more insensitivity, and a greater capacity for exploitation (e.g., Garofalo et al. 2019; Lima-Costa et al. 2022; Marcus et al. 2014). Notwithstanding, it is worth mentioning that the relationship found between spitefulness and sadism is notably high, which is expected given the close conceptual link between these constructs. Simplifying the definition of spitefulness, it could be viewed as a form of sadism that involves a willingness to experience some degree of harm. Given this definition, along with findings from previous studies (Balta et al. 2019; Kircaburun et al. 2021b; Zeigler-Hill et al. 2015) on the construct and the cross-sectional research method employed (Kock, Berbekova, and Assaf 2021), correlations exceeding 0.50 were to be expected.

Along the same lines, it was to be expected that spitefulness would be positively related to the aggressiveness variable employed, that is, trolling ($p < 0.01$) (Garofalo, Rogier, and Velotti 2017; Hardaker 2010; Marcus et al. 2014). This finding also reinforces the idea that a spiteful person may use violence to inflict harm on another (Kimbrough and Reiss 2012; Marcus et al. 2014; Rogier et al. 2021; Zeigler-Hill and Noser 2018).

3.3 | Factorial Invariance Across Gender for the Spanish Spitefulness Scale

As for gender differences, as expected (H_3), men scored higher than females on the spiteful variable: means were respectively 26.60, $SD = 9.91$ vs. 22.70, $SD = 6.92$, Welch's $t(282.86) = -5.16$, $p < 0.001$, Cohen's $d = -0.49$ (e.g., Jonason and Zeigler-Hill 2018; Lima-Costa et al. 2022; Marcus et al. 2014; Rodgers and Dahling 2018). To meaningfully compare the latent means across genders, it is necessary to establish scalar (strong) invariance, as configural invariance alone does not allow for such comparisons. In our study, invariance testing was conducted following the guidelines of Cheung and Rensvold (2002). We assessed configural, weak, strong, and strict invariance, with the change in CFI across models remaining below the threshold of 0.01 (Table S3). Specifically, the CFI change from configural to weak was 0.004, from weak to strong was 0.001, and from strong to strict was 0.000, indicating that the model maintains an acceptable fit at each level. The establishment of strong (scalar) invariance confirms that the comparison of latent means between men and women is valid. These results confirm that the same factor structure applies across genders, allowing for meaningful gender comparisons.

4 | Limitations

One of the limitations of the study is the difficulty in generalizing the results obtained. This is due, on the one hand, to the cross-sectional design of the study, which also makes it difficult to establish causal relationships between the variables. On the other hand, the type of sampling employed (i.e., by convenience) also makes it difficult to generalize the results. In addition, this contributes to the fact that the sample was not very diverse in sociodemographic terms (age, socioeconomic status, employment situation, Spanish territory, etc.). As a future line of research, it is suggested that longitudinal designs and samples that are more representative of the population be used. Another limitation is the lack of assessment of the discriminant validity of the scale with totally unrelated constructs, which should be addressed in future research to strengthen the robustness of our findings. Additionally, the study revealed low consistency in some variables, which did not reach 0.70. Specifically, in narcissism and openness to experience. It is proposed as a future study to replicate this study using alternative scales.

5 | Conclusions

Our study has provided the first validation with adequate psychometric properties of a specific scale to measure spitefulness in Spain: the validation of the Spanish Spitefulness Scale. This Spanish validation allows us to establish a solid basis for cross-cultural comparisons and enrich our understanding of the nature and manifestations of this phenomenon.

Understanding this trait, considered like the Dark Tetrad traits an antagonistic personality trait, has important implications for understanding the interpersonal and social dynamics in which spitefulness may play a significant role. Given that spitefulness is closely linked to aggressive behaviors, studying this variable is crucial for comprehending the underlying mechanisms of aggression and hostility in social interactions. Deepening the analysis of this phenomenon may contribute to the early identification of emotional and social conflicts and the implementation of interventions aimed at promoting healthy interpersonal relationships.

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Conflicts of Interest

The authors declare no conflicts of interest.

Data Availability Statement

The data that support the findings of this study are available from the corresponding author upon reasonable request.

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Supporting Information

Additional supporting information can be found online in the Supporting Information section.