

Validity and reliability of the Spanish version of the Displaced Aggression Questionnaire

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Abstract

Background: The Displaced Aggression Questionnaire (DAQ) is an instrument that assesses personality differences in the tendency to displace aggression. This scale is composed of three factors: angry rumination (as affective dimension), revenge planning (as cognitive dimension), and general tendency to engage in displaced aggression (as a behavioral dimension). The present study examined the validity and reliability of the Spanish version of the DAQ. **Method:** The sample consisted of 429 student and non-student participants. **Results:** The results showed good psychometric properties, and factor analyses revealed a clear three-factor structure. Further, preliminary data about associations between DAQ scores and indirect aggression and emotion regulation strategies are shown. **Conclusions:** The scale presents adequate evidence for potential use in a Spanish population. We discuss its utility for research on different types of aggression (e.g., domestic abuse).

Keywords: Displaced aggression, angry rumination, revenge, Spanish validation.

Resumen

Adaptación y validación al castellano del Cuestionario de Agresión Desplazada: un estudio piloto. Antecedentes: el Cuestionario de Agresión Desplazada (CAD) es un instrumento diseñado para evaluar las diferencias individuales en la tendencia a mostrar una conducta agresiva, producto de una provocación inicial, dirigida a hacer daño hacia una persona distinta de la fuente responsable de tal provocación. El CAD está compuesto por tres dimensiones: rumiación de la ira (dimensión afectiva), planificación de venganza (dimensión cognitiva) y agresión desplazada (dimensión conductual). El objetivo del presente estudio fue la adaptación y validación al castellano del DAC. **Método:** el objetivo del presente estudio fue la adaptación y validación al castellano del DAC en una muestra de 429 adultos compuesta por estudiantes universitarios y población general. **Resultados:** el DAC mostró buenas propiedades psicométricas y una estructura de tres factores idéntica a la versión original. Por otra parte, se aportaron datos de relaciones entre variables no analizadas hasta la fecha, mostrando la asociación del CAD con la agresión indirecta y diferentes estrategias de regulación emocional. **Conclusiones:** este estudio aporta evidencia del potencial uso del CAD en población española. Se discute la utilidad de esta escala y su relación con otros tipos de comportamientos agresivos como la violencia doméstica.

Palabras clave: agresión desplazada, rumiación de la ira, venganza, validación.

Most research on aggression has focused on aggressive behavior involving situations wherein a provoked person retaliates against the provocateur. Sometimes, however, retaliation is constrained or inhibited for several reasons: the provocateur may be unavailable, the source of provocation is intangible (e.g., bad weather ruined a vacation), or because the provoked individual wants to avoid any negative consequences of retaliating (Miller, 1941). Given these situations, a person can instead *displace* an aggressive response to another target (Miller, Pedersen, Earleywine, & Pollock, 2003). The term *displaced aggression* refers to situations in which a person is provoked, is prevented from retaliating against the original

provocateur, and subsequently aggresses against a seemingly innocent target (Dollard, Doob, Miller, Mowrer, & Sears, 1939; Hovland & Sears, 1940). The processes involved in this construct have important implications for a wide range of behaviors, such as domestic abuse and road rage (Denson, Pedersen, & Miller, 2006).

Prior to the decade of 2000, research on displaced aggression was focused on experimental designs. Denson et al. (2006) introduced the study of individual differences in the general tendency to exhibit displaced aggression, and proposed *trait displaced aggression* as a construct that can be explained by three components: angry rumination (as affective dimension), revenge planning (as cognitive dimension), and general tendency to engage in displaced aggression (as a behavioral dimension). Anger rumination is conceptualized as perseverative thinking about a personally meaningful anger-inducing event (Denson, 2013). Revenge planning is a cognitive component that refers to engaging in thoughts about retaliation for a prior provocation (Sukhodolsky,

Golub, & Cromwell, 2001). Finally, the behavioral aspect of displaced aggression involves a tendency to behave aggressively toward those other than the original source of a provocation (Denson et al., 2006).

To assess individual differences in displaced aggression, Denson et al. (2006) developed the Displaced Aggression Questionnaire (DAQ). This scale is currently the only available instrument that measures the tendency to direct aggressive behavior towards innocent targets. The questionnaire consists of 31 items, which participants are asked to respond using a seven-point Likert-type scale (1 = *extremely uncharacteristic of me*, 7 = *extremely characteristic of me*). The measure has a three-factor structure consisting of affective (10 items), cognitive (11 items), and behavioral (10 items) elements: Angry rumination ("I keep thinking about events that angered me for a long time"), Revenge planning ("When somebody offends me, sooner or later, I retaliate"), and Behavioral displaced aggression ("If someone made me angry, I would likely vent my anger on another person"). Across several samples composed of college students and a national community sample of Internet participants, the DAQ showed high levels of internal consistency for the total scale ($\alpha = .95$) and subscales (Angry rumination $\alpha = .92$, Revenge planning $\alpha = .93$, and Behavioral displaced aggression $\alpha = .92$), good test-retest reliability at an interval of 4-weeks (ranging from .75 to .80) and 11-weeks (ranging from .78 to .89), and evidences of convergent (e.g., physical and verbal aggression, anger coping styles) and discriminant validity (e.g., impulsivity, extroversion) (Denson et al., 2006). Finally, the DAQ predicted important outcomes, such as road rage, domestic abuse, and displaced aggression (in a laboratory paradigm) (Denson et al., 2006).

Only one adaptation of the DAQ has been carried out, in a Romanian population. It confirmed the three-factor structure of the original scale and showed good psychometric properties (Sârbescu, 2013). However, no additional adaptations in other languages, such as Spanish, have been published, which poses an obstacle to advances in research. Further transcultural research and adaptations are needed to confirm the construct validity of the DAQ in community populations of different cultures and countries.

Although scores on the DAQ have been related to various forms of aggression, such as physical and verbal aggression, and are even linked to gang affiliation (Vasquez, Osman, & Wood, 2012), no data are available about their relation to other types of aggression, including indirect aggression (a common and damaging type of aggression that includes gossiping and social exclusion) (Anguiano-Carrasco & Vigil-Colet, 2011). In addition, little is known about the relationship between displaced aggression and emotion regulation strategies other than angry rumination.

The present research sought to develop and examine the validity and reliability of the Spanish version of the DAQ. Our first aim was to confirm the three-factor structure in a different cultural sample and to provide evidence of psychometric properties and test-retest reliability of the Spanish version of the DAQ. The second objective was to confirm the convergent and discriminant validity shown in the original scale, examining the relationships between the Spanish DAQ and related variables, such as trait anger and anger expression, negative and positive affect, personality traits, angry rumination and physical and verbal aggression (Denson et al. 2006). The third objective was to provide preliminary analyses about the relationship between the three dimensions of DAQ and

hitherto unexamined variables, including indirect aggression and a wide range of cognitive and emotional regulation strategies (e.g., other-blame, catastrophizing, positive reappraisal).

Method

Participants

A total of 429 participants (24.2% males, 75.8% females), ranging in age from 18 to 69 ($M = 25.31$, $SD = 08.74$), completed the Spanish version of the DAQ. Participants consisted of undergraduate students ($N = 249$), ranging in age from 19 to 54 ($M = 21.83$, $SD = 4.49$), and non-students ($N = 165$), (27.2% males, 72.8% females), ranging in age from 18 to 69 ($M = 30.13$, $SD = 10.72$). The subset of students completed additional tests to evaluate trait anger and anger expression and control, different forms of aggressive behavior, affective style and personality traits. The subset of non-student participants completed additional tests to evaluate anger rumination and other cognitive and emotional regulation strategies. Finally, to evaluate test-retest reliability, 131 student participants of the initial sample (15.3% males, 84.7% females), ranging in age from 20 to 54 ($M = 24$, $SD = 7.03$), completed the measure a second time, approximately 1 month after the first administration.

Instruments

The Displaced Aggression Questionnaire (DAQ; Denson et al., 2006). The Spanish translation of the DAQ was created using a back translation procedure involving two independent translators (native Spanish speaker and native English speaker), both of whom were experts in the topic.

State-Trait Anger Expression Inventory-2 (STAXI-2; Spielberger, 1999). This self-report evaluates the general predisposition to feel and express anger. Five of the subscales from the STAXI-2, measured using a four-point scale (1 = *not at all*, to 4 = *very much so*), were administered: Trait anger (10 items), Anger expression-out (6 items), Anger expression-in (6 items), Anger control-out (6 items), and Anger control-in (6 items). The STAXI-2 is a well-validated anger assessment instrument that has demonstrated good psychometric properties in normal adults in both the original (alphas ranged from .84 to .86) and the Spanish version (alphas ranging from .69 to .89) (Miguel-Tobal, Casado, Cano-Vindel, & Spielberger, 2001).

The Big-Five Inventory (BFI-44; John, 1991) consisted of 44-item, rated on a 5-point Likert scale (1 = *strongly disagree*, 5 = *strongly agree*), assessing Big Five personality factors: Neuroticism, Extraversion, Openness, Agreeableness, and Conscientiousness. The psychometric properties of this scale have shown adequate alphas reliabilities for the English (alphas ranging from .69 to .77) and the Spanish version (alphas ranging from .66 to .89) (Benet-Martínez & John, 1998).

The Aggression Questionnaire (AQ; Buss & Perry, 1992) is a self-report measure of trait aggression. It has four subscales and uses a five-point Likert-type scale (1 = *extremely uncharacteristic of me* to 5 = *extremely characteristic of me*). We used two subscales: Physical aggression (9 items) and Verbal aggression (5 items). The AQ is a widely-used measure and has been well validated with adequate internal consistency as well as convergent and discriminative validity. The Spanish version showed an adequate

internal consistency ($\alpha = .86$ for Physical aggression and $\alpha = .68$ for Verbal aggression) (Rodríguez, Peña, & Graña, 2002).

The Positive and Negative Affect Schedule (PANAS; Watson, Clark, & Tellegen, 1988). The PANAS is a 20-item self-report scale, using a 5-point format (from 1= *very slightly or not at all*, to 5= *extremely*), which evaluates affective style through two factors: Positive affect and Negative affect. We measured how the people usually feel. PANAS has shown adequate psychometric properties in both the original version, with internal consistency ranging from $\alpha = .87$ to $\alpha = .91$, and the Spanish version (alphas ranging from .87 to .91; Sandín et al., 1999).

The Indirect Aggression Scale (IAS; Forrester, Eatough, & Shevlin, 2005) assesses indirect aggression in adults. IAS is a 25-item self-report that uses a five-point Likert-type scale (1 = *never experience this behavior* to 5 = *regularly*). The scale has two versions, aggressor and target version. We used the aggressor version (e.g., “Talked about them behind their back”). The original

version proposed a three-factor structure with alphas ranging from .81 to .84, but the Spanish version showed a clear one-dimensional structure for indirect aggression with high reliability ($\alpha = .87$; Anguiano-Carrasco & Andreu Vigil-Colet, 2011).

The Cognitive Emotion Regulation Questionnaire (CERQ; Garnefski, Kraaij, & Spinhoven, 2001) is a 36-items self-report questionnaire assessing the cognitive emotional regulation strategies a person tends to use after experiencing negative life events. The questionnaire uses a 5-point Likert response format ranging from 1 (*almost never*) to 5 (*almost always*) and has nine subscales grouped into Adaptive (acceptance, positive refocusing, refocus on planning, positive reappraisal, and putting into perspective) and Maladaptive regulation strategies (self-blame, rumination, catastrophizing and blaming others). Both the original version, with alphas ranging from .68 to .83, and the Spanish version, with alphas ranging from .61 to .89, showed adequate psychometric properties (Domínguez-Sánchez, Lasa-Aristu, Amor, & Holgado-Tello, 2013).

Table 1
DAQ items and their confirmatory factor loadings

Item	Standardized factor loadings
Angry rumination	
1. Cuando algo me enfada, sigo pensando en ello durante mucho tiempo	.72
2. Me enfurezco solo de pensar en cosas que me han molestado en el pasado	.79
3. A menudo pienso una y otra vez en cosas que me han indignado	.76
4. A veces no puedo evitar pensar en situaciones en las que alguien me ha enfurecido	.79
5. Cada vez que experimento ira no dejo de pensar en ello durante un tiempo	.78
6. Después de que una discusión con alguien haya terminado sigo peleando con esa persona en mi imaginación	.60
7. Recreo en mi mente un episodio de ira después de que haya ocurrido	.69
8. Me siento enfadado/a por ciertas cosas de mi vida	.59
9. Pienso en determinados acontecimientos ocurridos hace tiempo y que todavía consiguen enfadarme	.73
10. Cuando estoy enfadado/a, suelo centrarme en mis pensamientos y sentimientos durante mucho tiempo	.74
Displaced aggression	
11. Cuando alguien o algo me enfada, suelo tomarla con otra persona	.87
12. Cuando me siento mal, la tomo con otros	.91
13. Cuando estoy enfadado/a, la tomo con personas cercanas a mí	.90
14. A veces me altero con un amigo o familiar incluso cuando esa persona no es la causa de mi ira o frustración	.87
15. Pago mi enfado con personas inocentes	.92
16. Cuando las cosas no salen como las he planeado, descargo mi frustración en la primera persona que veo	.73
17. Si alguien me enfada, probablemente descargue mi ira con otra persona	.80
18. A veces me altero por algo en el trabajo o en clase y me pongo hostil con familiares o amigos	.79
19. Si estoy enfadado/a, no importa contra quien arremeta	.66
20. Si he tenido un día duro en el trabajo o en clase, tiendo a hacer que todos lo sepan	.46
Revenge planning	
21. Cuando alguien me enfada, no puedo parar de pensar como devolvérsela a esa persona	.77
22. Si alguien me hace daño, no me siento tranquilo hasta que consigo vengarme	.82
23. A menudo sueño con situaciones donde consigo vengarme de personas	.69
24. Podría llegar a frustrarme si no pienso en el modo de ajustar cuentas con alguien que se lo merece	.80
25. Pienso en la forma de tomar represalias con alguien que me ha hecho enfadar pasado un tiempo de que haya ocurrido	.85
26. Si alguien te hace daño es justo devolvérsela	.77
27. Cuanto más tiempo pasa, más satisfacción obtengo de vengarme	.77
28. Cuando un conflicto ha terminado, tengo durante mucho tiempo fantasías de venganza	.79
29. Si alguien me ofende, tarde o temprano tomaré represalias	.82
30. Si una persona te hace daño a propósito, tienes derecho a poder vengarte de ella	.70
31. Nunca ayudo a quien se porta mal conmigo	.26

Angry Rumination scale (ARS; Sukhodolsky et al., 2001). The ARS is a self-report scale consisting of 19 items rated on a 4-point Likert-type scale ranging from 1 (*almost never*) to 4 (*almost always*) that assess the tendency to think about anger-provoking situations and to recall anger episodes from the past. The scale has four subscales: Angry afterthoughts, Thoughts of revenge, Angry memories, and Understanding of causes. The English version has a good internal consistency ($\alpha = .93$) and adequate test-retest reliability ($r = .77$). We used a Spanish version, which has shown similar psychometrics properties (alphas ranging from .69 to .83) and has confirmed the original four-factor structure (Kannis-Dymand, Salguero, & Ramos-Cejudo, 2014).

Procedure

Participation was voluntary and anonymous. Student respondents received course credit for their participation. Non-student respondents were recruited using a snowball-sampling technique. They were offered the opportunity to enter a draw to win a shopping voucher (€50.00). The questionnaires were administered electronically, completed individually, and with instructions given in writing.

Data analysis

The SPSS statistical package was used to compute descriptive statistics, correlation analyses, and internal consistency. EQS 6.1 (Bentler, 1995) was used to perform confirmatory factor analysis (CFA) using the maximum likelihood (ML) method. Since univariate and multivariate kurtosis statistics were found to indicate non-normality, the Satorra-Bentler scaled ML correction was used to adjust the model chi-square (Hu, Bentler, & Kano, 1992). Given the sensitivity of the chi-square statistic to sample size, additional measures of model fit were used (Hu & Bentler; 1999): the root mean square error of approximation (RMSEA), the Bentler comparative fit index (CFI), and the standardized root mean square residual (SRMR). RMSEA values below .08 are considered a reasonable fit, whereas values below .05 indicate good fit. CFI values above .90 indicate good fit and SRMR values are expected to be below .10.

Results

Factor structure and reliability

The hypothesized three factor model showed the following fit indices: $S-\chi^2(431) = 1089.05, p < .001$; normed $\chi^2 = 2.53$; RMSEA = .06 (90% CI = .055–.064); CFI = .91; SRMR = .06. These indices indicate a good fit to the data, showing that the three-factor solution is acceptable. All factor loadings were statistically significant ($p < .05$) and higher than .45 (see Table 1), with the exception of the item 31, that showed a loading of small magnitude (.26).

Cronbach's alpha coefficients for the subscales were .91 for Angry rumination, .92 for Revenge planning and .94 for Displaced aggression. Correlations between DAQ subscales were positive and statistically significant, $r = .48$ between Angry rumination and Revenge planning, $r = .48$ between Angry rumination and Displaced aggression, and $r = .31$ between Revenge planning and Displaced aggression. We also assessed reliability using test-retest correlation. Test-retest reliability over 1 month was $r_{11} = .78$ for

Angry rumination, $r_{11} = .87$ for Revenge planning, and $r_{11} = .83$ for Displaced aggression.

Gender differences

Gender differences were not found for angry rumination scores. Males were found to score significantly higher than females on planning revenge $M_{male} = 2.38, SD_{male} = 1.08; M_{female} = 1.93, SD_{female} = .99; t(1,427) = 3.90, p < .05, d = .37$, and females scored significantly higher than males on displaced aggression $M_{female} = 2.88, SD_{female} = 1.28; M_{male} = 2.41, SD_{male} = 1.14; t(1,427) = -3.37, p < .05, d = -.32$. According to the criteria of Cohen (1977), the effect size of these differences was small.

Associations between DAQ and related variables

We assessed the validity of the DAQ by analysing relationships between its three subscales and related constructs (Table 2).

DAQ subscales correlated in the expected direction with anger related variables, affect style and different forms of aggressive behavior. With respect to personality traits, the highest magnitude correlations were observed in the associations between angry rumination and revenge planning with neuroticism ($r = .56$ and $r = .48$ respectively).

As expected, positive and significant correlations were found between the three subscales of the DAQ and all of the subscales of the ARS. A pattern of low negative correlations was found between DAQ subscales and different adaptive strategies, with the highest magnitude correlations found for Positive reappraisal. ($r = -.35$ with Angry rumination, $r = -.35$ with Revenge planning, and $r = -.28$ with Displaced aggression). With respect to maladaptive strategies, low correlations were found between DAQ subscales and Rumination (the correlation between Angry rumination and Rumination was $r = .28$), whereas stronger (and positive) correlations appeared in the associations between DAQ subscales and Catastrophizing and Blaming others (see Table 2).

Discussion

The present study assessed the validity and reliability of the Spanish version of the DAQ and examined preliminary associations among the three dimensions of DAQ and theoretical relevant variables not previously investigated, namely, indirect aggression and cognitive and emotional regulation strategies.

First, our data confirmed the hypothesized three-factor structure for the Spanish version of the DAQ according to the original structure of the scale. All factor loadings were statistically significant and higher than .45, with the exception of the item 31, which showed a factor loading of .26. In the original version, this item also obtained the slowest factor loading. It is possible that this item ("I never help those who do me wrong") measures the tendency to not commit prosocial and positive behaviors toward someone who misbehaved, rather than revenge planning. Further research about the factor structure of the DAQ in other populations is needed to assess the utility of this item. Results also showed that the DAQ subscales have good reliability, with both adequate internal consistencies, displaying Cronbach alpha coefficients similar to those reported for the original version and evidences of test-retest stability over a 1 month period. Regarding gender differences, our results showed similar results for Revenge

Table 2
Means, standard deviations, alpha reliabilities and correlations between the DAQ subscales and other related variables

Related variable	N	M(SD)	α	Angry rumination (N= 429; M= 3.65, SD= 1.24; $\alpha= .91$)	Revenge planning (N= 429; M= 2.04, SD= 1.03; $\alpha= .92$)	Displaced aggression (N= 429; M= 2.77, SD= 1.27; $\alpha= .94$)
Trait Anger	249	2.17(.52)	.84	.56**	.55**	.36**
Anger Expression-Out	249	1.98(.54)	.73	.37**	.44**	.34**
Anger Expression-In	249	2.13(.64)	.76	.36**	.12	.18**
Anger Control-Out	249	2.82(.70)	.90	-.37**	-.51**	-.21**
Anger Control-In	249	2.46(.77)	.87	-.31**	-.39**	-.20**
Positive Affect	249	3.43(.57)	.79	-.27**	-.17**	-.08
Negative Affect	249	1.93(.66)	.85	.58**	.39**	.25**
Physical Aggression	249	1.77(.55)	.76	.35**	.10	.55**
Verbal Aggression	249	2.87(.62)	.67	.28**	.31**	.32**
Indirect Aggression	249	1.54(.33)	.84	.27**	.22**	.41**
Extroversion	249	3.47(.87)	.86	-.22**	-.10	-.06
Neuroticism	249	2.93(.86)	.85	.56**	.48**	.23**
Openness	249	3.80(.64)	.81	-.18**	-.34**	-.06
Agreeableness	249	3.80(.55)	.66	-.35**	-.31**	-.39**
Conscientiousness	249	3.50(.67)	.81	-.16**	-.07	-.17**
Angry Afterthoughts	165	1.68(.64)	.87	.77**	.40**	.54**
Thoughts of Revenge	165	1.38(.56)	.84	.51**	.33**	.80**
Angry Memories	165	1.75(.46)	.72	.72**	.43**	.56**
Understanding of causes	165	2.28(.62)	.70	.53**	.24**	.35**
Self-Blame	165	2.47(.77)	.65	.20*	-.01	.05
Acceptance	165	3.10(.82)	.66	.01	-.07	-.01
Rumination	165	3.07(.84)	.68	.28**	.01	.06
Positive Refocusing	165	2.95(.95)	.85	-.20*	-.22**	-.14
Refocus on Planning	165	3.91(.87)	.84	-.21**	-.22**	-.18*
Positive Reappraisal	165	3.94(.90)	.82	-.35**	-.35**	-.28**
Putting into Perspective	165	3.57(.96)	.84	-.19*	-.26**	-.15
Catastrophizing	165	1.60(.70)	.83	.51**	.40**	.45**
Blaming others	165	1.77(.63)	.81	.54**	.35**	.53**

Note = * p<.05; ** p<.01

planning (men higher scores than women). Contrary to original version, where no gender differences were observed, women rated on Displaced aggression higher than men, although the effect was small.

Second, DAQ subscales correlated in the expected direction with trait anger, affective style and personality. These findings are consistent with the results found with other types of aggression (Burt, Mikolajewski, & Larson, 2009; Ruiz-Pamies, Lorenzo-Seva, Morales-Vives, Cosi, & Vigil-Colet, 2014). However, contrary our expectations, low associations were found between Thoughts of revenge subscale (ARS) and Revenge Planning (DAQ). This may be explained by Revenge planning being composed of items that focus on retaliation and attitudes about retaliation (“If somebody harms me, I am not at peace until I can retaliate”), as opposed to items about actual thoughts of revenge.

Third, we provided preliminary evidence of unexamined relationships between DAQ and indirect aggression, and several cognitive and emotional regulation strategies. Regarding indirect aggression, DAQ subscales displayed similar associations with the correlations with verbal and physical aggression. Indirect aggression requires the ability to momentarily inhibit a direct confrontation, and aggressing later through the purposeful

manipulation and damage of peer relationships (Forrest et al., 2005). This aspect of postponing the aggressive response is shared with displaced aggression. Further research is needed to explore potential common mechanism in both types of aggression. In relation to regulation strategies, catastrophizing and blaming others showed the strongest and positive relationship with DAQ. When provoked, some individuals may hold innocent others responsible because it may be safer and more feasible to avoid the negative consequences of blaming the real source of a provocation. On the other hand, the Angry rumination subscale of the DAQ was weakly related to Rumination subscale of CERQ. This may be because angry rumination focuses on negative aspects of others and action-oriented responses, such as retaliation, whereas other types of rumination, such as sadness rumination, are more likely to focus on negative aspect on the self and are oriented to passive conduct and inhibited responses (Nolen-Hoeksema, 1998).

It is important to consider some limitations of the current study. First, the sample of participants was primarily female, and the results might not be generalizable to men. More heterogeneous samples are required for generalizing our results to the Spanish population. Second, our use of self-report measures, which are associated with social desirability, may lead participants to under-

estimate their aggression. Future research should control this effect, as previous work has done with other types of aggression (Ruiz-Pamies et al., 2014). Third, a cross-sectional design was used to analyze the relationships with other variables, restricting conclusions about the direction of causality of our results.

Despite these limitations, our results encourage the instrument's use for measuring individual differences in displaced aggression in the Spanish population. The Spanish DAQ will allow further research on trait displaced aggression and related processes, and the examination of its predictive role in important contexts, such

as domestic abuse and road rage (Denson et al., 2006). These processes and behaviors have important implications for the quality of interpersonal and intra-familial relationships. Further research in these areas is needed, and the use of DAQ may be a valuable instrument for it.

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References

- Anguiano-Carrasco, C., & Vigil-Colet, A. (2011). Assessing indirect aggression in aggressors and targets: Spanish adaptation of the Indirect Aggression Scales. *Psicothema*, 23(1), 146-152.
- Benet-Martínez, V., & John, O. P. (1998). Los cinco grandes across cultures and ethnic groups: Multi-trait multimethod analyses of the Big Five in Spanish and English. *Journal of Personality and Social Psychology*, 75, 729-750.
- Burt, S. A., Mikolajewski, A. J., & Larson, C. L. (2009). Do aggression and rule-breaking have different interpersonal correlates? A study of antisocial behavior subtypes, negative affect, and hostile perceptions of others. *Aggressive Behavior*, 35, 453-461.
- Buss, A. H., & Perry, M. P. (1992). The aggression questionnaire. *Journal of Personality and Social Psychology*, 63, 452-459.
- Cohen, J. (1977). *Statistical power analysis for the behavioural sciences*. New York, NY: Academic Press.
- Denson, T. F. (2013). The multiple systems model of angry rumination. *Personality and Social Psychology Review*, 17, 103-123.
- Denson, T. F., Pedersen, W. C., & Miller, N. (2006). The Displaced Aggression Questionnaire. *Journal of Personality and Social Psychology*, 90, 1032-1051.
- Dollard, J., Doob, L. W., Miller, N. E., Mowrer, O. H., & Sears, R. R. (1939). *Frustration and aggression*. Oxford, England: Yale University Press.
- Domínguez-Sánchez, F. J., Lasa-Aristu, A., Amor, P. J., & Holgado-Tello, F. P. (2013). Psychometric properties of the Spanish Version of the cognitive emotion regulation questionnaire. *Assessment*, 20, 253-261.
- Forrest, S., Eatough, V., & Shevlin, M. (2005). Measuring adult indirect aggression: The development and psychometric assessment of the indirect aggression scales. *Aggressive Behavior*, 31, 84-97.
- Garnefski, N., Kraaij, V., & Spinhoven, P. (2001). Negative life events, cognitive emotion regulation and depression. *Personality and Individual Differences*, 30, 1311-1327.
- Hovland, C., & Sears, R. (1940). Minor studies in aggression: VI. Correlation of lynchings with economic indices. *Journal of Psychology*, 9, 301-310.
- Hu, L., & Bentler, P. M. (1999). Cutoff criteria for fit indexes in covariance structure analysis: Conventional criteria versus new alternatives. *Structural Equation Modeling*, 6, 1-55.
- John, Q. P. (1990). The "Big Five" factor taxonomy: Dimensions of personality in the natural language and in questionnaires. In L. A. Pervin (Ed.), *Handbook of personality: Theory and research* (pp. 66-100). New York: Guilford Press.
- Kannis-Dymand, L., Salguero, J. M., & Ramos-Cejudo, J. (2014, September). *Two brief anger measures: A Spanish validity study and cross-cultural comparison*. Paper presented at X International Congress of the Spanish Society of Anxiety and Stress, Valencia, Spain.
- Miguel-Tobal, J. J., Casado, I., Cano-Vindel, A., & Spielberger, C. D. (2001). *Inventario de Expresión de Ira Estado-Rasgo - S. T. A. X. I.-2*. Madrid: TEA Ediciones.
- Miller, N. E. (1941). The frustration-aggression hypothesis. *Psychological Review*, 48, 337-342.
- Miller, N., Pedersen, W. C., Earleywine, M., & Pollock, V. E. (2003). A theoretical model of triggered displaced aggression. *Personality and Social Psychology Review*, 7, 75-97.
- Nolen-Hoeksema, S. (1998). Ruminative coping with depression. In J. Heckhausen & C. S. Dweck (Eds.), *Motivation and self-regulation across the life span* (pp. 237-256). New York: Cambridge University Press.
- Rodríguez, J. M., Peña, E., & Graña, J. L. (2002). Adaptación psicométrica de la versión española del Cuestionario de Agresión [Validation of the Spanish version of the aggression questionnaire]. *Psicothema*, 14(2), 476-482.
- Ruiz-Pamies, M., Lorenzo-Seva, U., Morales-Vives, F., Cosi, S., & Vigil-Colet, A. (2014). I-DAQ: A new test to assess direct and indirect aggression free of response bias. *The Spanish Journal of Psychology*, 17, 1-8.
- Sandín, B., Chorot, P., Lostao, L., Joiner, T. E., Santed, M. A., & Valiente, R. M. (1999). Escalas PANAS de afecto positivo y negativo: validación factorial y convergencia transcultural [The PANAS Scales of positive and negative affect: Factor analytic validation and cross-cultural convergence]. *Psicothema*, 11(1), 37-51.
- Sârbescu, P. (2013). Displaced aggression in Romania: Data from a college student sample. *International Journal of Traffic and Transportation Psychology*, 1(1), 28-34.
- Spielberger, C. D. (1998). *State-Trait Anger Expression Inventory: Professional manual*. Odessa, FL: Psychological Assessment Resources.
- Sukhodolsky, D. G., Golub, A., & Cromwell, E. N. (2001). Development and validation of the anger rumination scale. *Personality and Individual Differences*, 31, 689-700.
- Watson, D., Clark, L. A., & Tellegen, A. (1988). Development and validation of brief measures of positive and negative affect: The PANAS scales. *Journal of Personality and Social Psychology*, 54, 1063-1070.
- Vasquez, E. A., Osman, S., & Wood, J. L. (2012). Rumination and the displacement of aggression in United Kingdom gang-affiliated youth. *Aggressive Behavior*, 38(1), 89-97.

