



Adaptation and validation of the spanish version of the moral attentiveness scale

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ABSTRACT

The present study adapted and validated Reynolds' (2008) Moral Attentiveness Scale (MAS) for use in Spanish populations (MAS-S). The adaptation process employed a committee approach to ensure linguistic and cultural appropriateness. The validation study ($N = 428$) included exploratory and confirmatory factor analyses. The results supported the original two-factor structure, explaining 64.2 % of the variance ($\chi^2_{33} = 165, p < .001$; $CFI = 0.93$; $TLI = 0.91$; $RMSEA = 0.10$). Reliability indices were high ($Cronbach's \alpha > 0.90$). Convergent and discriminant validity evidence is provided through positive correlations between MAS-S dimensions and theoretically related constructs such as Social Justice Orientation and Empathic Concern and Personal Distress, while no significant associations were found with sacrificial moral dilemmas. These findings establish the MAS-S as a reliable and valid instrument for assessing moral attentiveness in Spanish contexts, with implications for advancing theoretical and practical research in moral psychology.

1. Adaptation and validation of the spanish version of the Moral Attentiveness Scale (MAS-S)

Moral attentiveness is defined as an individual's predisposition to perceive moral aspects of the environment. It is argued that both moral awareness and moral sensitivity and attentiveness are processes related to moral perception (Gantman & Van Bavel, 2015). However, moral awareness and moral sensitivity focus on the identification of explicit moral dilemmas, whereas moral attentiveness is proactive. In other words, it is a predisposition to actively perceive everyday situations as potentially fraught with moral implications, even in the absence of an obvious ethical dilemma (Reynolds, 2008).

As previous research has shown, individual differences in how people perceive and respond to morally challenging situations can have significant implications for their mental health and psychosocial well-being. In the scientific literature, decision-making in the face of moral dilemmas has been associated with dysphoric emotions such as sadness, fear (Cordellieri et al., 2020), regret, guilt, shame (Tasso et al., 2017) and anger (Russell & Giner-Sorolla, 2013). Furthermore, prolonged exposure to moral dilemmas can lead to psychological problems such as compassion fatigue or burnout (Mullen et al., 2017). In this sense, moral mindfulness, by influencing the frequency with which an individual

perceives and reflects on moral dilemmas, may play a significant role in their everyday experience and thus have an impact on mental health.

1.1. Assessment of moral attentiveness

To address the need to measure this individual tendency to perceive everyday situations in moral terms, Reynolds (2008) developed the Moral Attentiveness Scale (MAS). The MAS consists of twelve items grouped into two theoretical dimensions: perceptual moral attentiveness and reflective moral attentiveness. Perceptual moral attentiveness measures the tendency to actively perceive moral aspects in everyday situations. Reflective moral attentiveness measures the tendency to regularly reflect on moral issues. Although both dimensions jointly define the construct of moral attentiveness, they are conceptually distinct and scored separately, as they reflect two differentiated cognitive pathways related to the perception and consideration of moral aspects of the environment (Reynolds, 2008).

To our knowledge, the MAS is one of the main instruments available for assessing this construct, with versions in English (Reynolds, 2008) and Chinese (Dong & Ni, 2018). Given the importance of moral attentiveness in understanding psychological well-being and its influence on how individuals perceive and respond to morally challenging situations,

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the present study aims to adapt and validate a version of the MAS for the Spanish population (MAS-S).

The Spanish version of the MAS (MAS-S) is expected to replicate the original two-factor structure (Reynolds, 2008) and show meaningful associations with related constructs. Specifically, a positive relationship is expected between the MAS-S and social justice, defined as the principle ensuring equitable distribution of resources and opportunities in society (Hidalgo et al., 2018). The original version of the MAS showed theoretical relation with nurturance, a construct reflecting concern for the well-being of others and the moral obligations of a society toward its disadvantaged members (Ahmed & Jackson, 1979). Second, positive correlations are expected between MAS-S and emotional dispositions related to empathic concern and personal distress. These constructs are assessed through the *Sympathy, Tenderness and Distress Dispositional Scale* (SyTeD) (López-Pérez et al., 2019). Sympathy directs people toward others' suffering; tenderness evokes a nurturing attitude when faced with vulnerability; and personal distress involves an inward focus on one's feelings in response to others' distress. All three components are conceptually related to agreeableness; a trait previously associated with moral attentiveness. Finally, moral attentiveness is associated with the identification of moral issues rather than with the outcomes or decision-making. Thus, like Reynolds (2008), we do not anticipate a relationship between MAS-S and specific strategies to moral decision-making, such as deontological (duty-focused) or utilitarian (consequence-focused) responses to sacrificial dilemmas (Greene et al., 2001).

2. Method

2.1. Participants

The final sample consisted of 428 Spanish participants ($M = 29.81$; $SD = 12.4$), recruited via an email list from the University of Granada and through social media platforms, including Instagram, Facebook, and WhatsApp groups. The questionnaire was administered online from July to October of 2024. A total of 544 respondents started the survey but only responses of participants who gave informed consent and met the inclusion criteria (being at least 18 years old and take around ten minutes or more on completing the evaluation) were considered. Specifically, 116 participants were excluded because of the following reasons: 18 for being underage, nine did not provide consent, 47 completed the survey in under nine minutes (suggesting insufficient engagement), and 42 participants were excluded due to incomplete responses.

Out of the final sample, 297 were women (69.4 %), 125 were men (29.2 %), and the remaining six participants (0.7 %) identified as non-binary or preferred not to disclose their gender. Most participants held at least a bachelor's degree (37.6 % bachelor's degree, 32.2 % university degree, 22.2 % master's degree, and 5.4 % PhD), and the majority were employed in the education and social work sector (27.0 %), healthcare (16.2 %), or services and tourism (15.7 %).

2.2. Instruments

Spanish version of the Moral Attentiveness Scale (MAS-S) adapted from Reynolds (2008). The original version of the MAS was adapted using a committee approach (Harkness & Schoua-Glusberg, 1998), as recommended to address limitations of back translation (Douglas & Craig, 2007). Three researchers participated: two independently translated the English version into Spanish, and the third acted as adjudicator. The adjudicator reviewed both translations, resolving discrepancies to produce a final integrated version that reflected input from both translators.

The adjudicator's role involved accepting identical or comparable translations and selecting the clearer version when differences arose. For unresolved discrepancies, a joint meeting was held where researchers discussed and agreed on the best translation. All participants were familiar with the scale and experienced in translation and adaptation.

Like the original MAS, the MAS-S includes two subscales: *Perceptual*

Moral Attentiveness (7 items assessing awareness of moral aspects in daily life) and *Reflective Moral Attentiveness* (5 items evaluating the extent of moral reflection). The original scale showed good internal consistency (Perceptual: $\alpha = 0.87$; Reflective: $\alpha = 0.84$; Reynolds, 2008). Items were rated on a 7-point Likert scale (1 = "strongly disagree" to 7 = "strongly agree"). Supporting materials, including translations and the final version, are available at: https://osf.io/5skna/?view_only=a9f421d0218d46189daf51e1d17e6e5a.

Sympathy, Tenderness and Distress Dispositional Scale (SyTeD) created in Spanish by López-Pérez et al. (2019). The scale has three components: sympathy, tenderness and personal distress (12 items in total, four per subscale), and the answer format is a 7-point Likert scale (ranging from 1 = "not at all" to 7 = "absolutely").

The Social Justice Scale (SJS) of Torres-Harding et al. (2012); adapted into Spanish by Hidalgo et al. (2018), assesses individuals' orientation toward social justice. The instrument is composed of four subscales: attitudes toward social justice (11 items), perceived behavioural control (5 items), subjective norms (4 items), and behavioural intentions (4 items). Responses are measured using a 7-point Likert scale ranging from 1 ("strongly disagree") to 7 ("strongly agree").

Moral dilemmas adapted from Lotto et al. (2014). The set included eight sacrificial dilemmas, four involving direct harm and four involving indirect harm. Each dilemma required participants to choose between two dichotomous response options: "Yes" or "No." Selecting "Yes" reflected a consequentialist moral judgement, indicating a willingness to sacrifice one person to save a greater number, prioritising outcomes over rules. Conversely, selecting "No" reflected a deontological judgement, where participants rejected harming a minority regardless of the consequences, based on adherence to moral norms such as the prohibition against killing. All dilemmas were presented in a randomised order to minimise order effects and to capture participants' moral decision-making across a balanced range of scenarios. Spanish version of the dilemmas available at the public repository indicated above.

2.3. Procedure

All participants were informed of the study's objectives beforehand and asked for their informed consent. Participation was voluntary and respondents were entered into a 50€ prize draw as an incentive. To reduce potential bias associated with Common Method Variance (CMV), no identifying information was collected, thereby ensuring respondent anonymity. Additionally, the order of presentation of the assessment instruments was counterbalanced, as recommended by Tehseen et al. (2017). Ethical approval for this study was obtained from the Ethics Committee of the University of Granada (Code: 3998/CEIH/2024).

Responses were used to analyze the psychometric properties of the items and the scale, as well as to extract validity evidence based on the internal structure and on the relationships (convergent and discriminant) with other variables.

2.4. Analysis

Analyses were conducted with R v.4.4.0 software (R Core Team, 2021), in particular using dplyr (R Core Team, 2023), psych (Revelle, 2023), sjPlot (Lüdtke, 2023), semTools (Jorgensen et al., 2022), lavaan (Rosseel, 2012) packages. First, the psychometric properties of the subscales and the items were evaluated. Cronbach's alpha and McDonald's omega were used to assess the reliability (following Goodboy & Martin's recommendations; 2020), with values above 0.7 indicating satisfactory internal consistency. Corrected item-to-total correlations were examined to determine item discrimination, with values above 0.3 considered acceptable. Finally, the "alpha if item dropped" and "omega if item dropped" analyses identified items that did not contribute to the subscale's reliability. Specifically, items whose removal led to an increase in subscale's reliability.

Two phases were developed to gather validity evidence based on the

internal structure of the scale. First, an Exploratory Factor Analysis (EFA) to explore the dimensionality of the data. Second, a Confirmatory Factor Analysis (CFA) to evaluate the degree of overlap between the theoretical model proposed in the original version of the MAS-S and the data collected in the present study. To do that, we randomly split the total sample in two, ensuring that there were the same number of men, women and non-binary people in both samples. The EFA was run with principal axis factoring, and oblimin with kaiser normalization as the rotation method. We ran the CFA with the Maximum Likelihood Robust (ML from now on) estimation method to test the fit of the two-factor structure theoretically proposed for the original version of the MAS. We used the following goodness-of-fit indices (GOF) for model fit assessment: (a) The Root Mean Square Error of Approximation (RMSEA); (b) the Comparative Fit Index (CFI); and (c) the Tucker-Lewis Index (TLI) and (d) Standardized Root Mean Square Residuals (SRMR). RMSEA is considered acceptable at values lower than 0.06 (Hu & Bentler, 1999). CFI and TLI are considered to give evidence of acceptable fit at values over a 0.90 threshold (Bentler & Bonett, 1980), and an excellent fit at 0.95, and SRMR values are acceptable when they are 0.08 or lower (Hu & Bentler, 1999).

Correlations between MAS-S dimensions and those of theoretically related constructs provided validity evidence based on relationships with other variables. Specifically, the dimensions of SJS and SyTeD were analysed in relation to the dimensions of the MAS-S. To calculate the deontological and consequentialist responses to the moral dilemmas, answers choosing to do the proposed action were coded as 1, while answers deciding not to do the proposed action were coded as 0. We then sum the total of the responses, where higher scores meant more deontological responses and lower punctuations more consequentialist responses.

3. Results

3.1. Psychometric properties of the items and the scale

First, when assessing the psychometric properties of the scale, both Cronbach's Alpha and McDonald's Omega met the standard criterion of 0.7 for both subscales, confirming its reliability (Perceptual: $\alpha = 0.901$; $\omega = 0.904$; Reflective: $\alpha = 0.893$; $\omega = 0.895$). Second, we evaluated the psychometric properties of the items. Table 1 presents descriptive statistics, including mean and standard deviation (SD) for each item, along with detailed psychometric properties, that is, the corrected item-to-total correlations and reliability indices if item dropped.

As shown in Table 1, all items performed adequately. Mean scores were generally high, indicating that responses tended to cluster toward the agreement end of the scale. Standard deviations suggested sufficient variability in participants' responses. Regarding item discrimination,

corrected item-to-total correlations showed acceptable values, with all correlations exceeding 0.3, indicating that each item effectively differentiates between participants with varying levels of MAS-S. Finally, an analysis of reliability indices when individual items were excluded showed that all items contributed positively to the scale's internal consistency.

The determinant of the correlation matrix of the first subsample was notably low (0.00032), suggesting potential multicollinearity among the items. Examination of the correlation matrix (see Supplementary Table S1) revealed several item pairs exhibiting substantial correlations (e.g., ATM1 with ATM3 at $r = 0.76$, ATM4 with ATM5 at $r = 0.69$, and ATM5 with ATM10 at $r = 0.73$), which may indicate redundancy and could potentially affect the stability of the factor solution.

3.2. Sources of validity evidence

3.2.1. Validity evidence based on internal structure

Prior to conducting the EFA, the Kaiser-Meyer-Olkin measure of sampling adequacy ($KMO = 0.93$) indicated excellent suitability of the sample for factor analysis. Additionally, Bartlett's Test of Sphericity indicated that the data were suitable for factor analysis, $\chi^2_{66} = 1641.51$, $p < .001$, suggesting significant inter-item correlations. The EFA yielded a two-factor solution (see Fig. 1), explaining a cumulative variance of 63 % (Factor 1: 39 %, Factor 2: 26 %). The first factor (including seven items, which corresponds to the concept of Perceptual Moral Attentiveness) had an eigenvalue of 4.42, while the second factor (including five items, corresponding to the concept of Reflective Moral Attentiveness) had an eigenvalue of 3.11. The correlation between these two values was moderate and positive ($r = 0.64$). These results indicate that the two extracted factors capture a substantial proportion of the variability in the data, providing a clear factor structure for the scale. As Table 2 shows, factor loadings were in line with the ones found by Reynolds in the original scale (2008).

Subsequently, we examined the correlation matrix of the second subsample (see Supplementary Table S2). It revealed several item pairs exhibiting substantial correlations (e.g., ATM1 with ATM3 at $r = 0.67$, ATM5 with ATM9 at $r = 0.71$, and ATM10 with ATM11 at $r = 0.77$), which may indicate redundancy and could potentially affect the stability of the factor solution.

Then, a CFA was conducted to evaluate the theoretical two-factor structure of the MAS-S with the second subsample, fitted using the ML estimation with robust standard errors, not assuming a multivariate normality distribution given the Mardia test results (Skewness = 760.08, $p < .001$; Kurtosis = 11.45, $p < .001$). Prior to interpreting the model fit, key CFA assumptions were considered. As reported, multivariate normality was not met, which, as noted by Hu and Bentler (1999), can inflate the chi-square statistic and affect the RMSEA. The model had the following fit indexes: $\chi^2_{53} = 151.91$, $p < .001$; $CFI = 0.93$; $TLI = 0.91$; $RMSEA = 0.10$; $SRMR = 0.056$. This elevated RMSEA may be partially attributable to the observed violations of multivariate normality, which can lead to a poorer apparent fit when using ML estimation, even with robust standard errors. Despite this, the CFI and TLI, which are generally less sensitive to non-normality (Hu & Bentler, 1999), indicated an acceptable fit, as did the SRMR, a measure of residual variance. The CFA revealed two latent factors with a strong covariance estimate of 0.781 ($SE = 0.176$, $Z = 6.65.1$, $p < .001$), indicating a substantial relationship between these constructs.

Standardized factor loadings for all observed variables were statistically significant ($p < .001$), supporting the appropriateness of each item's loading onto its respective latent factor (see Fig. 2). For the perceptual attentiveness factor, standardized factor loadings ranged from 0.593 to 0.845. Specifically, the highest loading was observed for item 9, indicating it strongly reflected the latent construct. The reflective attentiveness factor displayed similarly strong loadings, ranging from 0.686 to 0.893, with item 11 having the highest standardized loading. These findings suggest that the factors are both internally consistent and

Table 1
Descriptive analysis and psychometric properties of the items.

Subscale	Item	<i>M</i> (<i>SD</i>)	Corrected item-to-total correlation	Cronbach's α if item dropped	McDonald's ω if item dropped
Perceptual	1	3.92 (1.55)	0.749	0.883	0.886
	2	3.74 (1.69)	0.653	0.894	0.896
	3	3.61 (1.62)	0.787	0.878	0.881
	4	3.48 (1.64)	0.692	0.889	0.892
	5	4.31 (1.65)	0.739	0.883	0.887
	8*	4.60 (1.67)	0.602	0.899	0.901
	9	4.07(1.47)	0.760	0.882	0.884
	6	4.85 (1.63)	0.740	0.870	0.873
Reflective	7	4.32 (1.68)	0.731	0.872	0.875
	10	4.67 (1.56)	0.776	0.862	0.865
	11	4.77 (1.56)	0.801	0.856	0.858
	12	4.86 (1.64)	0.651	0.890	0.891

M = mean; *SD* = Standard Deviation. * = Reverse-coded item.

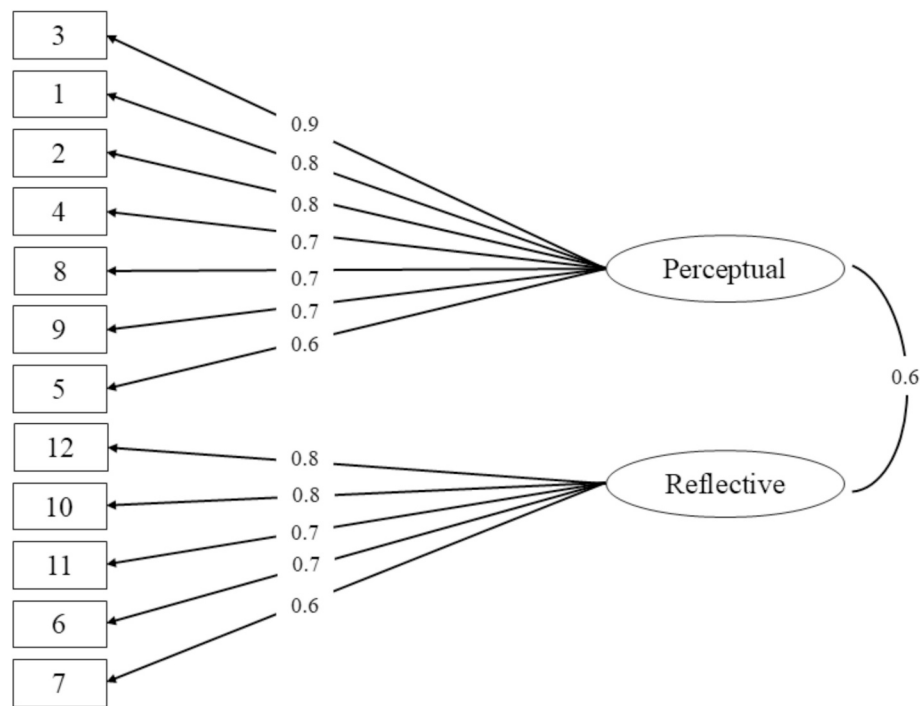


Fig. 1. Factor loadings and correlation between underlying factors for sample 1 (EFA).

Table 2

Results of exploratory factor analysis of the moral attentiveness items.

	Factor Loading		Communality
	Perceptual	Reflective	
1. In a typical day, I face several ethical dilemmas	0.847		0.672
2. I often have to choose between doing what's right and doing something that's wrong	0.769		0.555
3. I regularly face decisions that have significant ethical implications	0.888		0.731
4. My life has been filled with one moral predicament after another	0.744		0.538
5. Many of the decisions that I make have ethical dimensions to them	0.645		0.665
8. I rarely face ethical dilemmas*	0.694		0.529
9. I frequently encounter ethical situations	0.694		0.655
6. I regularly think about the ethical implications of my decisions		0.702	0.647
7. I think about the morality of my actions almost every day		0.590	0.564
10. I often find myself pondering about ethical issues		0.826	0.714
11. I often reflect on the moral aspects of my decisions		0.735	0.692
12. I like to think about ethics		0.835	0.530

Note. $N = 210$. Extraction method: principal axis factoring; rotation method: oblimin with kaiser normalization. * = Reverse-coded item.

well- represented by their respective items (see Table 3). Furthermore, we found the expected positive correlation between the factors perceptual and reflective moral attentiveness subscales ($r_{218} = 0.781$, $p < .001$).

3.2.2. Validity evidence based on relations with other variables

We examined the relationships between the subscales scores of the MAS-S and scores from other theoretically related variables to gather validity evidence based on these associations. Specifically, we calculated correlations between MAS-S and dimensions of SyTeD and SJS, and the

deontological level demonstrated when responding to moral dilemmas (see Table 4).

Supporting the hypotheses, significant and positive correlations were found between both perceptual and reflective moral attentiveness and two of the three SyTeD dimensions: sympathy and personal distress. In contrast, no significant associations emerged with tenderness. Additionally, both subscales of the MAS-S were positively related to all four dimensions of the SJS.

Regarding the moral dilemmas, we examined the distribution of consequentialist and deontological responses. Participants' responses were predominantly deontological, with 6.5 % choosing deontological options compared to 39.5 % choosing consequentialist ones. This distribution reflects a general tendency toward deontological reasoning among participants, independent of their scores on the MAS-S. Then, the deontological level defined as the proportion of deontological responses to the total number of moral dilemmas responded, did not show significant relationships with the perceptual moral attentiveness dimension, as expected. However, a significant negative correlation was found between the deontological level and the reflective moral attentiveness dimension ($r = -0.145$, $p < .05$).

4. Discussion

The present study aimed to adapt the MAS to Spanish and provide validity evidence supporting its intended purpose: measuring moral attentiveness in the Spanish population. To achieve this, the scale was adapted using a committee approach to ensure the preservation of the intended content beyond a literal translation. After the adaptation, a pilot study was conducted to gather validity evidence based on the internal structure and the relationships with other variables.

The adapted scale demonstrated excellent internal consistency, with strong reliability coefficients across both dimensions. Item analysis revealed that each item contributed positively to overall reliability. Regarding the scale's internal structure, the Spanish version showed the two-factor proposed in the original version (perceptual moral attentiveness and reflective moral attentiveness) and their corresponding items, as confirmed through exploratory and confirmatory factor

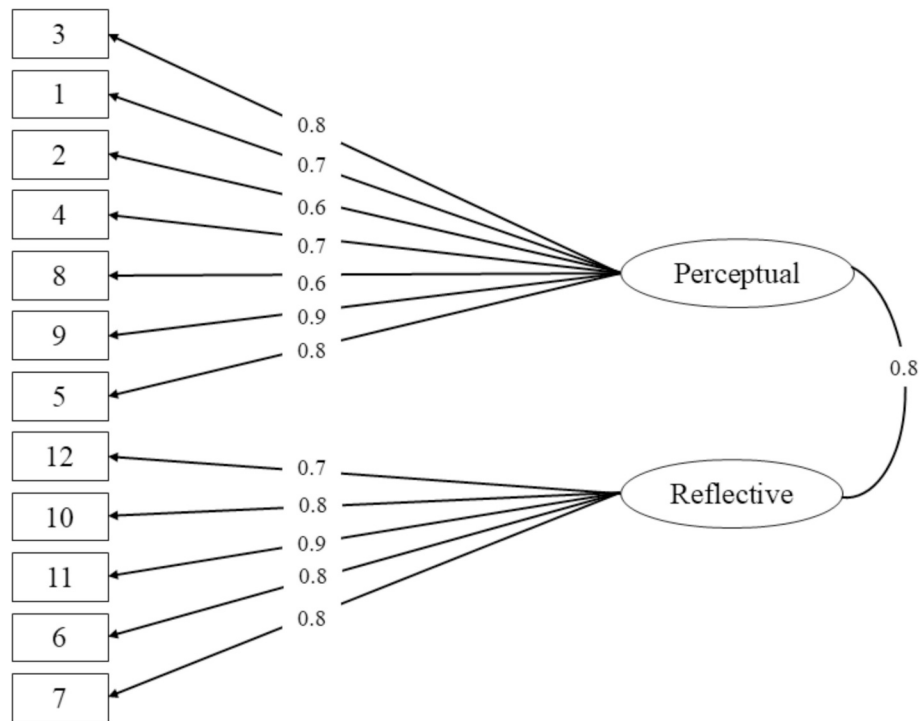


Fig. 2. Factor loadings and correlation between underlying factors for sample 2 (CFA).

Table 3
Confirmatory factor analysis of moral attentiveness items.

Item	Factor	
	Perceptual	Reflective
1. In a typical day, I face several ethical dilemmas	0.739	
2. I often have to choose between doing what's right and doing something that's wrong	0.608	
3. I regularly face decisions that have significant ethical implications	0.807	
4. My life has been filled with one moral predicament after another	0.718	
5. Many of the decisions that I make have ethical dimensions to them	0.815	
8. I rarely face ethical dilemmas*	0.593	
9. I frequently encounter ethical situations	0.845	
6. I regularly think about the ethical implications of my decisions		0.794
7. I think about the morality of my actions almost every day		0.826
10. I often find myself pondering about ethical issues		0.823
11. I often reflect on the moral aspects of my decisions		0.893
12. I like to think about ethics		0.686

Note. $N = 218$; we offer the standardized estimator.

analyses. These analyses supported the scale's internal structure, showing a structure and factor loadings comparable to Reynolds' findings. Although some fit indices, such as the RMSEA, exceeded the most stringent recommended thresholds, values between 0.05 and 0.10 are generally considered to indicate a reasonable fit (Browne & Cudeck, 1989). Moreover, the CFI and TLI met the commonly accepted criterion for adequate model fit, as values above 0.9 are typically regarded as acceptable (Schermelleh-Engel et al., 2003).

Overall, the results indicate that the fit indices of the Spanish version of the MAS (MAS-S) are comparable to those of the original, with some metrics performing marginally worse and others slightly better, suggesting similar robustness. Although the MAS was designed to provide independent scores for each subscale and does not yield a total score, it is worth noting that Reynolds (2008) occasionally refers to high or low

Table 4
Correlations between moral attentiveness scale dimensions and theoretically related variables.

Variable	Moral Attentiveness Scale (MAS)	
	Perceptual	Reflective
Empathic Concern and Personal Distress (SyTeD)		
Tenderness	0.042	0.128
Personal Distress	0.176**	0.141*
Sympathy	0.245***	0.444***
Social Justice Orientation (SJS)		
Attitudes toward Justice	0.184*	0.245***
Control behavior	0.259**	0.359***
Behavior intentions	0.328***	0.417***
Subjective norms	0.170*	0.243***
Moral dilemmas	-0.049	-0.145*

Note. $N = 428$; * $p < .05$; ** $p < .01$; *** $p < .001$; In moral dilemmas, higher values indicate more deontological responses and lower values more consequentialist responses.

moral attentiveness as a unified construct. This suggests an interplay between the two dimensions: frequent moral reflection might increase the tendency to perceive moral elements in one's environment, or vice versa. However, perceiving the world through a moral lens does not necessarily imply a sustained or reflective cognitive engagement with such stimuli. To ensure conceptual rigor and fidelity to the original instrument, we chose to analyze the two subscales separately.

Regarding the validity evidence based on the relationships with other variables, most of the hypotheses were confirmed, suggesting the scale and the dimensions effectively measures the intended constructs. Positive correlations were observed between the dimensions of the MAS-S and those of the SyTeD scale, as well as with the SJS dimensions. The SyTeD dimensions of sympathy and personal distress were significantly associated with both MAS-S subscales, aligning with Reynolds' theoretical associations with agreeableness and reinforcing the idea that individuals with higher moral attentiveness tend to exhibit prosocial tendencies. In contrast, no significant correlation was found with tenderness. This may be due to the nature of the tenderness items, which

focus on affective reactions to aesthetically pleasing or emotionally warm scenes (e.g., babies, elderly couples), rather than morally salient situations. Unlike sympathy or personal distress, which involve responses to suffering, loss, or the need to act, tenderness reflects a general sensitivity to vulnerability that is less directly connected to moral evaluation or decision-making.

All four dimensions of the SJS, used instead the nurturance construct in Reynolds' (2008) study, demonstrated positive correlations with both MAS-S dimensions. Nurturance refers to a belief in the importance of assisting those in need, rooted in principles of welfare and social obligation (Ahmed & Jackson, 1979). Similarly, the SJS evaluates commitment to equity in resource distribution and the fair treatment of marginalised groups. Both scales measure constructs grounded in equity and care values, explaining their positive correlation with perceptual and reflective moral attentiveness.

Finally, no significant correlation was found between the deontological level and the perceptual moral attentiveness dimension, although a significant and a negative correlation appeared between that variable and the reflective moral attentiveness dimension. The absence of a relationship between perceptual moral attentiveness and responses given to sacrificial moral dilemmas is consistent with the conceptualisation of moral attentiveness as a process of moral perception and reflection rather than a specific style or approach to resolving ethical conflicts. According to Reynolds (2008), moral attentiveness does not focus on distinguishing between specific moral options (e.g., deontological vs utilitarian approaches; Greene et al., 2001) or on the procedures or consequences driving decisions. Instead, it is defined as the extent to which individuals chronically perceive and reflect on moral elements in their everyday experiences. However, the relationship identified between the reflective moral attentiveness dimension and deontological responses suggests that the tools used to measure moral decision-making may influence these outcomes. While Reynolds (2008) found no significant relationship between moral attentiveness and formalism or utilitarianism, his study assessed these ethical orientations using Brady and Wheeler (1996) character trait scales, which evaluate formalist and utilitarian frameworks based on traits deemed important to the individual. In contrast, our study employed sacrificial dilemmas, which involve explicit decisions about moral conflicts, potentially explaining this discrepancy.

Additionally, prior research such as the one by Velasquez and Cassidy (2019), supports our findings by showing that reflective moral attentiveness is associated with harm-rejection and deontological inclinations. This suggests that this dimension may heighten sensitivity to the ethical implications of actions, thereby encouraging deontological choices.

The present study offers a tool to accurately measure moral attentiveness, a construct with significant theoretical and practical implications in the field of moral psychology. Previous research highlights that individual predisposed to observe and reflect on moral aspects in their daily lives are more likely to encounter and recognize morally conflicting situations (Al Halbusi et al., 2021). Thus, studying moral attentiveness provides a novel and necessary framework to address persistent debates surrounding models of moral behavior. Historically, research on decision-making and moral behavior has often relied on morally clear and universally recognized dilemmas, such as those involving severe, high-stakes conflicts (Christensen & Gomila, 2012). However, this approach raises fundamental questions: How representative are these dilemmas of everyday life? Can any moral dilemmas truly be considered universal or objective? These questions highlight the need for a theoretical framework that accounts for both subjective processes and contextual influences. Instruments measuring moral attentiveness can assist researchers in expanding existing models of cognitive mechanisms underlying moral behavior, thereby contributing to the key debate in moral psychology concerning the interplay between subjective and objective evaluations of moral dilemmas.

The assessment of moral attentiveness is also relevant in different

applied contexts. In education and the workplace, it can foster prosocial behavior and awareness of inequality (e.g., Al Halbusi et al., 2021). Training in attentiveness could promote fairer, more equitable environments. Clinically, high attentiveness may increase perception of moral conflict, which has been linked to burnout syndrome, stress, and compassion fatigue (Dalmolin et al., 2012). Including moral attentiveness in mental health assessment may guide targeted interventions.

This study presents certain limitations that must be considered when interpreting the results and designing future research. Although the sample size was sufficient for the analyses carried out, it cannot be considered representative of the general Spanish population. This aspect, added with voluntary recruitment, which introduces a potential self-selection bias, could limit the generalizability of the results.

Another limitation concerns the exclusive use of self-report measures, which are susceptible to biases such as social desirability and common method variance, potentially affecting the strength of observed correlations. To address that issues, future research could incorporate qualitative methods, such as semi-structured interviews or focus groups, to explore how participants interpret this item and to better understand the cognitive processes involved in answering the questionnaire.

Future research should aim to expand and diversify the sample and incorporate mixed-methods designs to strengthen the instrument's validity and applicability. Additionally, given the inherent subjectivity of moral attentiveness, it would be valuable to examine how its perceptual and reflective dimensions vary across different cultural and situational contexts. Broadening our understanding of these variations could contribute to the development of a more integrative and contextually grounded theoretical framework for the study of morality.

In conclusion, this study provides a valid and reliable tool for assessing moral attentiveness in the Spanish population. Beyond its practical applicability in educational, occupational, and clinical contexts, the scale supports the theoretical advancement of moral psychology by enabling the exploration of individual differences in moral perception and reflection. Its use in future research may help clarify the psychological mechanisms underlying moral decision-making and promote a more integrative and context-sensitive understanding of moral behavior.

Author's contribution

All authors whose names appear on the submission made substantial contributions to the conception and design of the work, the acquisition, analysis, and interpretation of data; drafted the work and revised it critically for important intellectual content; approved the version to be published; and agree to be accountable for all aspects of the work in ensuring that questions related to the accuracy or integrity of any part of the work are appropriately investigated and resolved.

CRediT authorship contribution statement

Belén Carrascal-Caputto: Writing – review & editing, Writing – original draft, Visualization, Validation, Supervision, Software, Project administration, Methodology, Investigation, Formal analysis, Data curation, Conceptualization. **Danna Galván-Hernández:** Writing – review & editing, Writing – original draft, Software, Methodology, Investigation, Formal analysis, Data curation. **Isabel Benítez:** Writing – review & editing, Writing – original draft, Visualization, Validation, Supervision, Project administration, Methodology, Investigation, Data curation.

Informed consent

Before the study commenced, all participants were informed of the study's objectives and asked for their informed consent. Participation was voluntary and respondents were entered into a 50€ prize draw as an incentive. No identifying information was collected to ensure

anonymity.

Ethical approval

The study was approved by the Ethical Committee of the University of Granada (Code: 3998/CEIH/2024).

Statement regarding research involving human participants and/or animals

All procedures performed in the study were in accordance with the research committee's ethical standards and with the 1964 Helsinki declaration and its later amendments or comparable ethical standards.

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Declaration of competing interest

The authors have no relevant financial or non-financial interests to disclose.

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Appendix A. Supplementary data

Supplementary data to this article can be found online at <https://doi.org/10.1016/j.paid.2025.113407>.

Data availability

Data and materials are available at the following link: https://osf.io/5skna/?view_only=a9f421d0218d46189daf51e1d17e6e5a.

References

- Ahmed, S. A., & Jackson, D. N. (1979). Psychographics for social policy decisions: Welfare assistance. *Journal of Consumer Research*, 5(4), 229. <https://doi.org/10.1086/208735>
- Al Halbusi, H., Ruiz-Palomino, P., Morales-Sánchez, R., Abdel Fattah, F. A. M., & (F. A. M.). (2021). Managerial ethical leadership, ethical climate and employee ethical behavior: Does moral attentiveness matter? *Ethics & Behavior*, 31(8), 604–627. <https://doi.org/10.1080/10508422.2021.1937628>
- Bentler, P. M., & Bonett, D. G. (1980). Significance tests and goodness of fit in the analysis of covariance structures. *Psychological Bulletin*, 88(3), 588–606. <https://doi.org/10.1037/0033-2909.88.3.588>
- Brady, F. N., & Wheeler, G. E. (1996). An empirical study of ethical predispositions. *Journal of Business Ethics*, 15(9), 927–940. <https://doi.org/10.1007/BF00705573>
- Browne, M. W., & Cudeck, R. (1989). Single sample cross-validation indices for covariance structures. *Multivariate Behavioral Research*, 24(4), 445–455. https://doi.org/10.1207/s15327906mbr2404_4
- Christensen, J. F., & Gomila, A. (2012). Moral dilemmas in cognitive neuroscience of moral decision-making: A principled review. *Neuroscience & Biobehavioral Reviews*, 36(4), 1249–1264. <https://doi.org/10.1016/j.neubiorev.2012.02.008>
- Cordellieri, P., Boccia, M., Piccardi, L., Kormakova, D., Stoica, L. V., Ferlazzo, F., ... Giannini, A. M. (2020). Gender differences in solving moral dilemmas: Emotional engagement, care and utilitarian orientation. *Psychological Studies*, 65(4), 360–369. <https://doi.org/10.1007/s12646-020-00573-9>
- Dalmolin, G. D. L., Lunardi, V. L., Barlem, E. L. D., & Silveira, R. S. D. (2012). Implicações do sofrimento moral para os(as) enfermeiros(as) e aproximações com o Burnout. *Texto & Contexto - Enfermagem*, 21(1), 200–208. <https://doi.org/10.1590/S0104-07072012000100023>
- Dong, R., & Ni, S. (2018). Psychometric properties of a Chinese version of the moral attentiveness scale. *Ethics & Behavior*, 28(2), 154–175. <https://doi.org/10.1080/10508422.2016.1274656>
- Douglas, S. P., & Craig, C. S. (2007). Collaborative and iterative translation: An alternative approach to back translation. *Journal of International Marketing*, 15(1), 30–43. <https://doi.org/10.1509/jimk.15.1.030>
- Gantman, A. P., & Van Bavel, J. J. (2015). Moral perception. *Trends in Cognitive Sciences*, 19(11), 631–633. <https://doi.org/10.1016/j.tics.2015.08.004>
- Greene, J. D., Sommerville, R. B., Nystrom, L. E., Darley, J. M., & Cohen, J. D. (2001). An fMRI investigation of emotional engagement in moral judgment. *Science*, 293(5537), 2105–2108. <https://doi.org/10.1126/science.1062872>
- Harkness, J., & Schoua-Glusberg, A. (1998). Questionnaires in translation. In E. J. Harkness (Ed.), *Vol. 3. Cross-cultural survey equivalence* (pp. 87–126). Zentrum für Umfragen, Methoden und Analysen - ZUMA.
- Hidalgo, N., Martínez - Garrido, C., & Perines, H. (2018). ¿Los futuros docentes están comprometidos con la justicia social? Validación y aplicación de la traducción al castellano de la escala de justicia social. *Páginas de Educación*, 11(2), 85–107. <https://doi.org/10.22235/pe.v11i2.1647>
- Hu, L., & Bentler, P. M. (1999). Cutoff criteria for fit indexes in covariance structure analysis: Conventional criteria versus new alternatives. *Structural Equation Modeling: A Multidisciplinary Journal*, 6(1), 1–55. <https://doi.org/10.1080/10705519909540118>
- Jorgensen, T. D., Pornprasertmanit, S., Schoemann, A. M., & Rosseel, Y. (2022). *semTools: Useful tools for structural equation modeling*. R package version [v.4.4.0]. Retrieved from <https://cran.r-project.org/web/packages/semTools/semTools.pdf>
- López-Pérez, B., Carrera, P., Ocejja, L., Ambrona, T., & Stocks, E. (2019). Sympathy and tenderness as components of dispositional empathic concern: Predicting helping and caring behaviors. *Current Psychology*, 38(2), 458–468. <https://doi.org/10.1007/s12144-017-9615-7>
- Lotto, L., Manfrinati, A., & Sarlo, M. (2014). A new set of moral dilemmas: Norms for moral acceptability, decision times, and emotional salience. *Journal of Behavioral Decision Making*, 27(1), 57–65. <https://doi.org/10.1002/bdm.1782>
- Lüdtke, D. sjPlot: Data Visualisation for Statistics in Social Science. R Package Version 2.8.16. <https://CRAN.R-project.org/package=sjPlot>
- Mullen, P. R., Morris, C., & Lord, M. (2017). The experience of ethical dilemmas, burnout, and stress among practicing counselors. *Counseling and Values*, 62(1), 37–56. <https://doi.org/10.1002/cvj.12048>
- R Core Team. (2021). *R: A language and environment for statistical computing [Software]*. R Foundation for Statistical Computing. <https://www.R-project.org/>
- R Core Team. (2023). *dplyr: A grammar of data manipulation*. R package version v.4.4.0. Retrieved from <https://rschneiders.github.io/rprogramming/content/chapter9/dplyr.html>
- Revelle, W. (2023). *psych: Procedures for psychological, psychometric, and personality research*. R package version [v.4.4.0]. Retrieved from <https://cran.r-project.org/package=psych>
- Reynolds, S. J. (2008). Moral attentiveness: Who pays attention to the moral aspects of life? *Journal of Applied Psychology*, 93(5), 1027–1041. <https://doi.org/10.1037/0021-9010.93.5.1027>
- Rosseel, Y. (2012). Lavaan: An R package for structural equation modeling. *Journal of Statistical Software*, 48(2), 1–36.
- Russell, P. S., & Giner-Sorolla, R. (2013). Bodily moral disgust: What it is, how it is different from anger, and why it is an unreasonable emotion. *Psychological Bulletin*, 139(2), 328–351. <https://doi.org/10.1037/a0029319>
- Schermelleh-Engel, K., Moosbrugger, H., & Müller, H. (2003). Evaluating the Fit of Structural Equation Models: Tests of Significance and Descriptive Goodness-of-Fit Measures. *Methods of Psychological Research*. <https://doi.org/10.23668/psycharchives.12784>
- Tasso, A., Sarlo, M., & Lotto, L. (2017). Emotions associated with counterfactual comparisons drive decision-making in footbridge-type moral dilemmas. *Motivation and Emotion*, 41(3), 410–418. <https://doi.org/10.1007/s11031-017-9607-9>
- Tehseen, S., Ramayah, T., & Sajilan, S. (2017). Testing and controlling for common method variance: A review of available methods. *Journal of Management Sciences*, 4(2), 142–168.
- Torres-Harding, S. R., Siers, B., & Olson, B. D. (2012). Development and psychometric evaluation of the social justice scale (SJS). *American Journal of Community Psychology*, 50(1–2), 77–88. <https://doi.org/10.1007/s10464-011-9478-2>
- Velasquez, K. R., & Cassidy, R. (2019). When buying milk, do you care about the cow?: Developing and validating a measure of focus on ethical considerations. <https://repository.lib.fsu.edu/islandora/object/fsu%3A709845/>