

Spanish Adaptation and Psychometric Properties of the Animal Attitude Scale and the Speciesism Scale

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This study analyzes the psychometric properties of a Spanish adaptation of two of the most widely used instruments for the measurement of the general attitudes toward animals: *Animal Attitude Scale* (AAS; there are three versions of 20, 10, and 5 items) and *Speciesism Scale* (SS). The Spanish adaptation of both scales followed the guidelines of the *International Tests Commission* and was administered to a sample of 470 participants. The purpose was to estimate the reliability and provide evidence of validity based on the internal structure of the tests and based on the relationship with other variables (type of diet). The estimated reliability revealed good scores, except for the 5 items version of the AAS. For the AAS-10 and SS, the factorial structure agreed with the author's proposal, but not for the 20 and 5 items version of the AAS. Validity analysis showed favorable evidence in the expected direction. The Spanish adaptation of SS and AAS (for three versions) shows good psychometric properties. The results pointed out a better performance in the 10 items version of the AAS based on test length and psychometric properties (reliability and validity).

Keywords: speciesism, attitude toward animals, human-nonhuman animal interaction, psychometric properties, scale adaptation.

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Compliance with Ethical Standards

All procedures performed in studies involving human participants were in accordance with the ethical standards of the Bioethics Committee on Human Research of the University of Researchers (n° reg. 202099600002679) and with the 1964 Helsinki Declaration and its later amendments or comparable ethical standards.

Informed Consent

Informed consent was obtained from all participants included in the study.

There is a long tradition of studying prejudice toward different human groups such as migrants, refugees, women, people with diverse physical or mental functionality, among others. Recent research supports the idea that the same ingroup-outgroup mentality responsible for the psychological representation of human-human relations (dominance and inequality between these groups) is applied to human-animal relations (e.g., Dhont et al., 2019; Plous, 2003). Speciesism can be understood as a form of prejudice like racism, sexism, or homophobia (e.g., Everett et al., 2019). This parallelism between speciesism and other forms of prejudice has received much theoretical and empirical support (e.g., Dhont et al., 2014; Sevillano & Fiske, 2019).

Social psychologists have focused their attention on the philosophical and anthropological concept of *Speciesism*. They have presented it as a psychological construct, susceptible to being measured and used in psychological research (e.g., Caviola et al., 2018). Being aware of the complex nature of speciesism, and considering the viewpoint of Caviola and Capraro (2019) about two aspects of speciesism (tendency to value humans more than other animals or anthropocentric speciesism, and tendency to value pet animals over other animals or pet speciesism), we consider speciesism would be understood as an ideological framework with double implication: (1) the speciesism that guides the general attitudes toward animals in the relationship between humans and animals, where humans are more valued than (other) animals, (2) and the speciesism that is more specific that guides the attitudes toward concrete species (focuses on the animals' species membership), where certain non-human animals are more valued than others. Speciesism does not only apply at the species level. It also applies at the individual level by belonging to a species or group of animals.

Despite being a recent topic, the attitude toward animals is a widely expanded matter in social interest terms (i.e., Pleasants, 2006), because these attitudes (either general or specific) predict prosociality toward animals and behavioral food choice (Caviola et al., 2018) and have influence on animal welfare and on the establishment of public policies (Ormandy & Schuppli, 2014). However, in the literature, the measurement of these attitudes is approached in different ways: by general attitude toward animals (anthropocentric speciesism) or by specific attitude to certain species (non-human animal speciesism). This conceptual diversity has led to the proliferation of different instruments for measuring human attitudes toward animals.

Anderson (2007) made a compendium book in which he included 21 instruments used to evaluate the human-animal interaction. Later, with the increasing social interest in this theme, the number of measures raised to 81 (Wilson & Netting, 2012). The first developed measure was the *Pet Attitude Scale* (Templer et al., 1981). The most cited until the publication date of the compendium in 2007 was the *Lexington Attachment to Pets Scale* (Johnson et al., 1992). Wilson and Netting (2012) took Anderson's compendium and investigated the status of the developed instruments on the human-animal interaction field, revealing 140 different measures.

Focusing on measures of speciesism as a general attitude toward animals (anthropocentric speciesism), the *Animal Attitude Scale* (AAS) by Herzog and colleges (1991) is one of the most widely used scales to measure the general attitudes toward the animals' use and treatment (Dhont et al., 2014; Herzog et al., 2015). The scale was designed to measure the general attitude toward the concern and use of other species; it maintains revealing excellent psychometric properties and has been used to investigate other aspects

of the human-animal interactions (Herzog et al., 2015). The authors dropped nine of the original 29 items, so the final version has 20 (Herzog et al., 1991). Afterward, Herzog and other colleagues reported two reduced versions of the scale, one with 10 items (AAS-10) and the other with five (AAS-5; Herzog et al., 2015).

Likewise, Caviola et al. (2018) developed a scale, the *Speciesism Scale*, to capture the concept of speciesism, which they define as the general beliefs about the moral inferiority of animals as manifested in support of concrete practices that imply the use of animals. This scale is intended to be a more concrete alternative to AAS for measuring speciesism. The authors built the scale by combining partially modified versions of items from the AAS and other existing scales and new items. From our perspective, this scale is a measure of the manifestations of anthropocentric speciesism like AAS. The *Speciesism Scale* has six items; all loading onto a single factor model.

The above-cited instruments (*Animal Attitude Scale* and *Speciesism Scale*) were developed for application to the Anglo-speaking population, without concern for other languages and their cultural constructs. Likewise, the small number of studies conducted in the Spanish context and the growing social interest developed around this issue, on which there is still not enough information (Pleasant, 2006), justifying the adaptation of the scales to Spanish. The purpose of the current study is to develop a Spanish adaptation and to analyze of the psychometric properties of the *Animal Attitude Scale* (Herzog et al., 2015) in its three versions (20, 10, and 5 items), and the *Speciesism Scale* (Caviola et al., 2018). The guidelines of the International Tests Commission (ITC, 2010) will be followed for the adaptation process and translation of both scales to the Spanish context (from Spain). A study based on the internal structure of the scales, the relation between the total scores of the scales and the evidence-based on its relationship with the type of diet - omnivore or vegetarian/vegan (used in the literature to differentiate groups by their high and low attitudinal values), will be carried out to obtain validity evidence. Finally, it is intended to inquire about the suitability of the three versions of the *Animal Attitude Scale* (20, 10, and 5 items) to verify which of them has better psychometric properties.

In the current investigation, the hypotheses that guide the validity studies are that both the *Animal Attitude Scale* (in its versions of 20, 10, and 5 items) and the *Speciesism Scale* adapted to Spanish context will prove a single factor model, as affirmed by their authors (Herzog et al., 2015; Caviola et al., 2018, respectively). Also, it is expected to obtain moderate-high and negative correlations (high attitudinal values, lower values of speciesism) between both scales since previous studies found those results (Herzog et al., 2015). Likewise, it is presumed to find a greater concern for animal welfare in vegans/vegetarians than on omnivores. People on a vegan/vegetarian diet have more positive attitude scores toward animals than people on an omnivorous diet (e.g., Preylo & Arikawa, 2008).

Method

Participants

The participants, a total of 470 who filled out both scales via an online survey, were recruited by quota sampling according to diet type (50% omnivorous diet, 50% vegan/vegetarian diet) because this variable could be relevant for the psychometric analysis.

Measures

Animal Attitude Scale (AAS, Herzog et al., 1991; 2015). The scale measures the general attitude toward the concern and use of other species. Herzog et al. (2015) shortened the 20 items scale (AAS-20) into two versions of 10 (AAS-10) and 5 items (AAS-5). The scores of both scales demonstrated good reliability, $\alpha = .90$ for AAS-10 and $\alpha = .82$ for AAS-5. The correlations between the full scale (AAS-20) and the two brief versions were high (Herzog et al., 2015): AAS-10 ($r = .98$), AAS-5 ($r = .95$). Five-point Likert-scale statements were used in all versions, from 1 ("Strongly disagree") to 5 ("Strongly agree"). The higher the score indicates greater ethical concern for animals. The versions adapted to the Spanish context of the scales were used for this study (see Appendix A).

Speciesism Scale (SS, Caviola et al., 2018). The SS measures speciesism like a psychological construct and shows its analogy with other forms of prejudicial attitude. It has six items and a single factor. The scale scores showed a high test-retest reliability ($r = .88$), and an internal consistency of $\alpha = .81$ (Caviola et al., 2018). The answer options followed a Likert-type format of 7 options, from 1 ("Strongly disagree") to 7 ("Strongly agree"). The higher score reflects more speciesist beliefs. In this study, the scale adapted to the Spanish context was used (see Appendix B).

Socio-demographic variables. Participants reported their gender, age, type of diet (e.g., omnivore, vegetarian/vegan) and other socio-demographic variables.

Procedure

The adaptation process of the *Animal Attitude Scale* and the *Speciesism Scale* to the Spanish context was accomplished following the guidelines for translating and adapting tests (ITC, 2010), which point to the need to attend to the context, the construction and adaptation, the application, and interpretation of the scores.

For the context analysis, it was considered whether the constructs of the general attitude toward animals (for AAS) and speciesism (for SS) could be extrapolated to Spanish culture. Four psychologists, specialists in psychosocial measurement and methodology, analyzed the suitability and significance of using both constructs in psychological research in Spain. The operationalization of both constructs, their relationships, and their implications in human-animal interactions was discussed. It was concluded that they were extrapolated constructs with similar meaning in the Spain's culture (other Spanish-speaking countries may require adaptations of the scales, relying upon the specific cultural context to which they will apply). In the next phase, construction and adaptation of the test, the items were independently translated from English into Spanish, so the equivalence of the adapted and original items could be verified. Three psychologists with extensive knowledge of English conducted this task. The three independent translations of the scales were transferred to a table to see similarities and differences. Subsequently, they selected the translated items that best represented the original version conceptually and linguistically, obtaining after consensus a version adapted to the Spanish context. The team of psychometricians discouraged the use of extreme quantifiers in the item stems (such as those used in items 3 and 8). In item 15, it was decided to avoid the reference to the example (cats) because, first, cats are not animals associated with animal experimentation in Spain, and second, making reference to domestic animals could impact the item. Later, an online pilot study was carried out with the general population to verify the level of understanding of the scale. Small modifications were made to some items to improve their

interpretation. Finally, regarding the application of the test (using the *LimeSurvey* online survey administration platform: <https://www.limesurvey.org>), the link to perform the questionnaire was sent through social networks, requesting, in turn, to spread and share the link, generating wide dissemination. To represent people with a vegetarian/vegan diet, websites specialized in the area were used to disseminate the survey.

Participants were informed about the anonymity of the responses, the protection of personal data, and the voluntary character of participation (none received any financial compensation), having to concede their consent. The study was approved by the Bioethics Committee in Human Research of the University of the authors (n° reg. 202099600002679). The compilation process lasted three weeks.

Data analysis

Data analysis was conducted with the people who responded to the scales completely: 470 for AAS-20, AAS-10, and AAS-5, and 603 for SS (461 persons completed all scales). First, the descriptive statistics of the *Animal Attitude Scale* and the *Speciesism Scale* items were calculated.

To obtain validity evidence related to the internal structure, a confirmatory factor analysis (CFA) was performed with the unweighted least-squares estimation procedure due to non-normal multivariate data and the use of Likert-scale items. To verify the adequacy of the models, the following fit indices were calculated: difference χ^2/df , root mean square error of approximation (RMSEA), standardized root mean square residual (SRMR), Tucker-Lewis Index (TLI), and Comparative Fit Index (CFI). We followed the recommendations regarding the cut-off value of the fit indices: χ^2/df values between 1 and 3 indicate good fit and between 3 and 5 acceptable (e.g., Jöreskog, 1970); values less than .06 for the RMSEA index indicate a good fit; values lower than .05/.06 for SRMR, and higher than .95 for the TLI and CFI indices indicate a good fit (Hu & Bentler, 1999). For the comparison of the models of the *Animal Attitude Scale* (in its three versions: AAS-20, AAS-10, and AAS-5), the optimal model was considered the one with the best fit values. The estimation of the reliability of the scores of the scales was estimated using Cronbach's alpha coefficient and McDonald's omega coefficient.

Regarding evidence of validity concerning other variables, the correlations between the scores of the *Animal Attitude Scale* (in its three versions) with the scores of the *Speciesism Scale* were analyzed. Four independent samples t tests were also carried out, having as dependent variables the scores of the AAS-20, AAS-10, AAS-5, and SS, by type of diet (omnivore vs. vegetarian/vegan). The analysis was performed using the statistical packages SPSS version 25 and JASP version 0.13.1.

Results

Descriptive Statistics

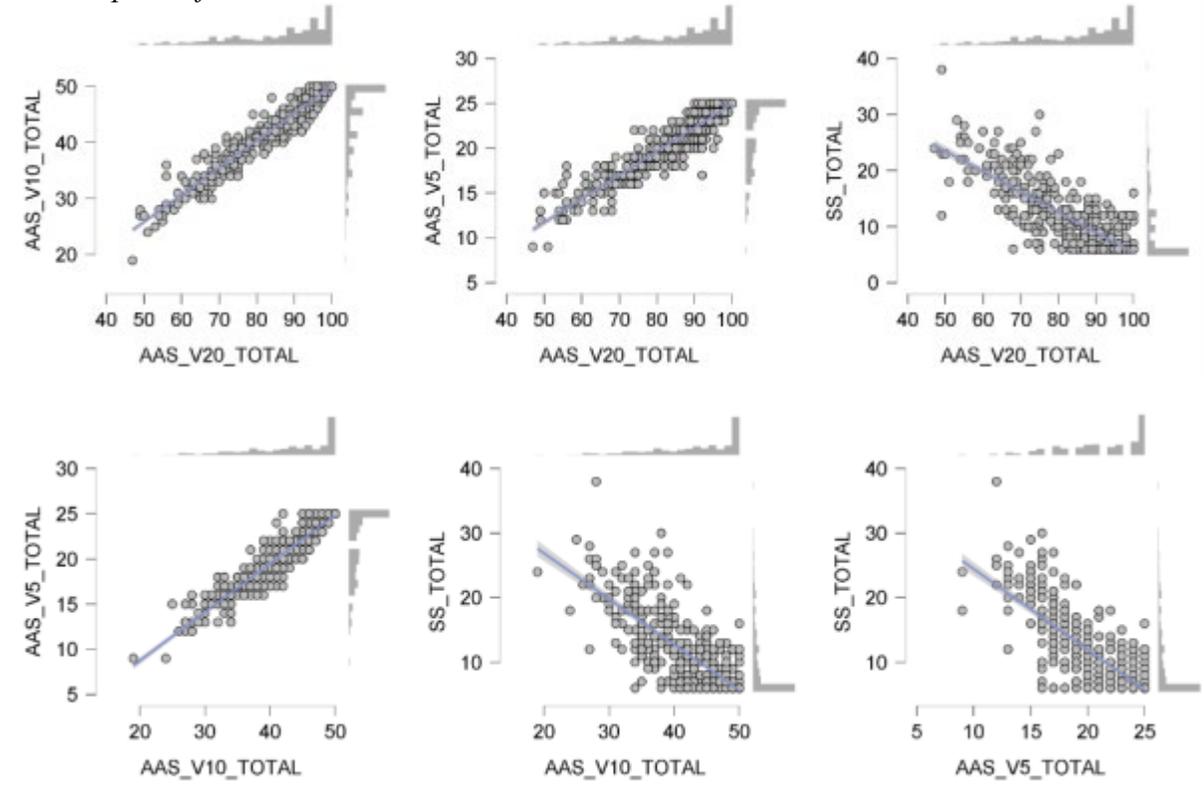
Finally, 52.8% of the participants had an omnivorous diet versus 47.2% who were vegan/vegetarian. All participants responding to an online survey were over 18 years of age (Mean = 34.92; SD = 13.36; 30% Male) and had their residence in Spain. Regarding employment status, 52.6% were employed, 31% were students, 8.9% were unemployed, 4.9% were retired/pensioner, and 2.6% had another situation (e.g., unpaid domestic work).

The descriptive statistics of the *Animal Attitude Scale* scores (versions of 20, 10, and 5 items) and the *Speciesism Scale* are shown in Table 1. The frequency distributions of the scale scores are represented graphically in Figure 2. In general, the sample has a

positive attitude toward animals, according to the mean scores of the AAS-20, AAS-10, AAS-5 scales, and a low score on the *Speciesism Scale*. Intercorrelations among items and item-scale correlations are shown in Table 2. All correlations were positive and statistically significant ($p < .001$).

Figure 1

Scatter plots of the AAS-20, AAS-10, and AAS-5 and the SS



Internal structure of the scales

The results of the confirmatory factor analysis (CFA) to check the one-dimensional model of the scales are shown in Table 3. Regarding the *Animal Attitude Scales*, the three versions had adequate fit indices, although the AAS-10 version showed the best values in these indices. On the *Speciesism Scale*, although the χ^2/df and RMSEA values showed a lack of fit, the other fit indices (SRMR, TLI and CFI) were adequate. The scatter plots (Figure 1) and the correlation matrix (Table 3) between the scores of the *Animal Attitude Scale* showed positive, high, and statistically significant relationships between different versions of the AAS.

Reliability analysis

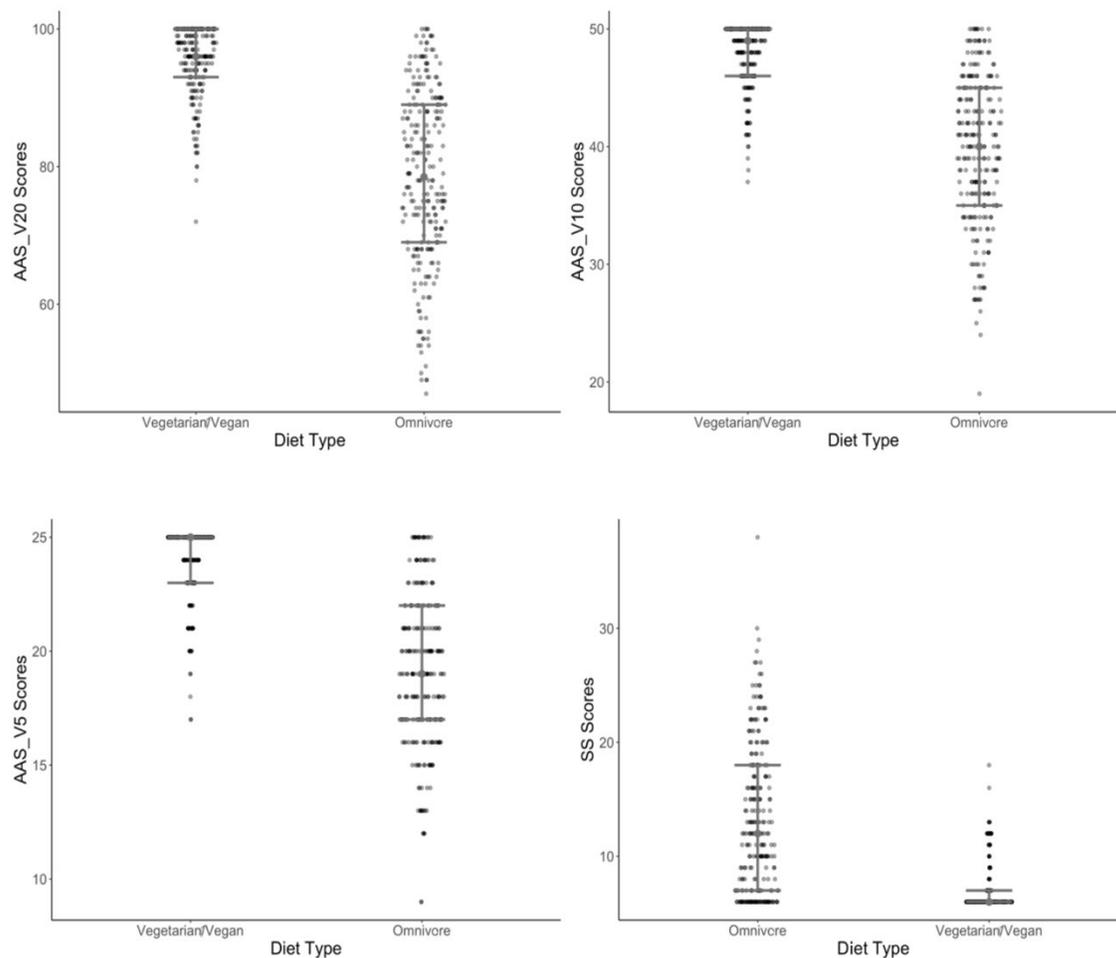
The estimated reliability for the AAS-20 scores was $\alpha = .923$, and $\omega = .932$; AAS-10 was $\alpha = .852$, and $\omega = .861$; AAS-5 was $\alpha = .741$, and $\omega = .796$. The estimated reliability for the SS scores was $\alpha = .824$, and $\omega = .815$.

Evidence of validity about other variables

The *Speciesism Scale* presented negative, high, and statistically significant correlations with the three versions of the *Animal Attitude Scale* (Table 2). The results of the *independent samples t-tests* (Table 3) show us a similar pattern in the four scales, where the type of diet is statistically significant. The effect sizes were large (Table 3). Vegans/vegetarians had more favorable scores toward animals (higher scores on AAS-20, AAS-10, and AAS-5 and lower scores on SS) compared to omnivores (Figure 2).

Figure 2

Flexplot of the scores of the Animal Attitude Scale (in its three versions) and the Speciesism Scale by diet type



Discussion

Despite the importance and social interest in speciesism, there are no measures in Spanish that reflect speciesism or the general attitude toward animals. For this purpose, we propose the Spanish adaptation of the *Speciesism Scale* (Caviola et al., 2018), which measures speciesism as a psychological construct, and the *Animal Attitude Scale* (Herzog et al., 1991; 2015), one of the scales more widely used to determine the attitudes toward the concern and use of animals, and the analysis of their psychometric properties.

Regarding the reliability of the adapted scales, all were acceptable. However, the lowest estimated values were for the AAS-5. The results of evidence of validity about other variables agree with other studies (Caviola et al., 2018; Herzog et al., 2015; Piazza et al., 2015), where the relationships between the different versions of the *Animal Attitude Scale* are positive and strong, as well as negative associations with scores on the *Speciesism Scale* (Herzog et al., 2015).

The differences found in the scores of the scales based on the type of diet are like those described in the literature (Caviola et al., 2018; Piazza et al., 2015; Rosenfeld, 2019). People who maintain an omnivorous diet show lower scores on the *Animal Attitude Scale* (in all three versions) than people who eat a vegetarian/vegan diet, showing less favorable attitudes toward animals. In contrast, omnivorous people score higher on the *Speciesism Scale* than vegetarians/vegans. In our Spanish adaptation of AAS and SS, these differences turn out to be significant and especially relevant and can be understood as evidence that the food decisions people make reflect attitudes related to animals and the use made of them.

Finally, given the results on the psychometric properties of the three versions of the AAS, we recommend the use of AAS-10, due to its good reliability and, especially, due to its one-dimensional structure according to previous studies (Herzog et al., 1991, 2015). It also has the fit indices more favorable to the univariate structure compared to the other two versions. The AAS-20 version, even having good reliability, does not have optimal fit indices. The AAS-5 has the lowest reliability of the three versions and worse fit indices than AAS-10 in the CFA. The *Speciesism Scale* presents adequate psychometric properties, having satisfactory reliability and favorable evidence of validity (with a good fit to the unifactorial model).

Table 1
Descriptive Statistics of the scales: AAS-20, AAS-10, AAS-5, and SS

<i>Statistics</i>	AAS-20			AAS-10			AAS-5			SS		
	Total	Omnivore	Vegetarian/Vegan	Total	Omnivore	Vegetarian/Vegan	Total	Omnivore	Vegetarian/Vegan	Total	Omnivore	Vegetarian/Vegan
N	470	248	222	470	248	222	470	248	222	603	248	222
Mean	86.509	78.645	95.293	43.521	39.661	47.833	21.377	19.113	23.905	10.179	13.032	7.144
Median	91	78.500	96	46	40	49	22	19	25	7	12	6
Mode	100	68	100	50	39	50	25	17	25	6	6	6
Std. deviation	12.911	12.688	5.188	6.441	6.336	2.790	3.637	3.418	1.687	5.806	6.434	2.222
Minimum	47	47	72	19	19	37	9	9	17	6	6	6
Maximum	100	100	100	50	50	50	25	25	25	38	38	18
Skewness	0.950	-0.317	-1.470	0.964	-0.390	-1.476	-0.782	-0.165	0.163	1.609	0.774	2.058
Kurtosis	0.012	-0.638	2.236	0.184	-0.393	1.738	-0.284	-0.388	2.735	2.325	0.004	3.800
Percentile 25	77	69	93	39	35	46	19	17	23	6	7	6
Percentile 50	91	78.5	96	46	40	49	22	19	25	7	12	6
Percentile 75	97	89	100	49	45	50	25	22	25	12	18	7
Plausible range	5-100			5-50			5-25			6-42		

Table 2
Intercorrelations among items and item-scale correlation

AAS	i1	i2	i3	i4	i5	i6	i7	i8	i9	i10	i11	i12	i13	i14	i15	i16	i17	i18	i19	i20
i2	.200																			
i3	.253	.250																		
i4	.367	.380	.457																	
i5	.245	.589	.229	.383																
i6	.247	.480	.225	.435	.492															
i7	.249	.823	.259	.404	.627	.519														
i8	.240	.688	.206	.384	.708	.601	.708													
i9	.277	.580	.230	.326	.477	.461	.574	.573												
i10	.245	.413	.281	.431	.425	.397	.440	.472	.449											
i11	.320	.390	.362	.496	.314	.419	.392	.363	.371	.309										
i12	.102	.230	.101	.214	.261	.203	.220	.267	.248	.186	.166									
i13	.254	.536	.261	.341	.468	.571	.562	.611	.502	.434	.363	.314								
i14	.294	.411	.353	.537	.421	.433	.415	.418	.375	.414	.376	.295	.396							
i15	.217	.558	.170	.234	.507	.376	.558	.550	.447	.371	.247	.145	.428	.323						
i16	.222	.802	.224	.336	.653	.523	.812	.737	.551	.430	.332	.203	.562	.425	.695					
i17	.243	.336	.216	.438	.305	.337	.313	.331	.319	.287	.404	.246	.287	.380	.177	.260				
i18	.183	.433	.207	.286	.370	.396	.418	.451	.375	.364	.330	.274	.475	.366	.335	.454	.289			
i19	.192	.439	.248	.369	.353	.275	.417	.370	.403	.354	.320	.191	.351	.371	.307	.392	.295	.267		
i20	.313	.324	.411	.609	.357	.387	.349	.361	.352	.437	.537	.221	.348	.421	.252	.318	.474	.296	.411	
AAS V20 TOTAL	.416	.805	.415	.615	.748	.692	.820	.820	.695	.617	.577	.392	.714	.630	.649	.818	.522	.603	.569	.596
AAS V10 TOTAL	.465	.802	.372	.581	.685	.617	.774	.803	.723	.633	.594	.314	.644	.631	.673	.775	.562	.520	.626	.570
AAS V5 TOTAL	.520	.825	.359	.558	.687	.624	.789	.852	.657	.650	.621	.279	.645	.536	.584	.772	.444	.510	.479	.527
SS																				
i2	.528																			
i3	.424	.391																		
i4	.471	.532	.599																	
i5	.376	.342	.335	.405																
i6	.521	.370	.416	.509	.354															
SS TOTAL	.783	.657	.686	.775	.648	.788														

Table 3

Correlations and fit indices from CFA of the scales: AAS-20, AAS-10, AAS-5, and SS

Scale	AAS-10	AAS-5	SS	Chi ² /df	RMSEA	SRMR	TLI	CFI
AAS-20	.970*	.940*	-.818*	2.268	.052	.081	.987	.989
AAS-10		.951*	-.796*	1.608	.036	.053	.992	.995
AAS-5			-.792*	2.091	.048	.055	.990	.995
SS				4.701	.078	.041	.991	.994

* $p < .001$ (bilateral).

Regarding the limitations, it is important to highlight the imbalance of the sample in terms of gender since more than half of the participants were women. In principle, this fact does not necessarily imply that the performance of the items of the scales is different for both sexes. However, invariance studies of the scales for men and women would be needed to ensure that there is no differential item functioning. On the other hand, people with a vegetarian/vegan diet may imply a very homogeneous sample in scores that may affect both reliability and validity. However, the results, where half of the sample are people with an omnivorous diet, increase the variability of the scores on the scales, and results show adequate reliability and favorable validity evidence. In this sense, it would also be worth considering studies of invariance of the measures according to the type of diet. In any case, we can say that the adapted scales work adequately for men and women and omnivores and vegans. Another limitation must do with the fact that the scales were administered online with incidental sampling, which limits the fulfillment of the scales to those who have this resource and, therefore, electronic devices, which implies a coverage bias (which can be present in any online research).

In future research, it would be essential to create scales for each type of category to which animals have been classified according to the function granted to them in society (e.g., domestic, consumption, entertainment).

In conclusion, the *Animal Attitude Scale* (more specifically AAS-10) and the *Speciesism Scale* adapted to the Spanish context show good psychometric properties, so their use in this population is supported by the results obtained. These instruments will allow the measurement and study of speciesism in the Hispanic scientific literature, absent until now and existing only in English-speaking countries.

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Appendix A Original items in English and adapted in Spanish of the AAS

- 1 *It is morally wrong to hunt wild animals just for sport* (*) (x)
Cazar animales salvajes solo por deporte es inmoral
- 2 *I do not think that there is anything wrong with using animals in medical research* (*) (x)
El uso de animales en la investigación médica es correcto
- 3 *There should be extremely stiff penalties including jail sentences for people who participate in cockfighting*
Debería haber penas duras, incluso cárcel, para la gente que participe en peleas con animales (por ejemplo, peleas de gallos o peleas de perros)
- 4 *Wild animals, such as mink and raccoons, should not be trapped and their skins made into fur coats*
No deberíamos utilizar animales salvajes para hacer ropa y abrigos
- 5 *There is nothing morally wrong with hunting wild animals for food*
No está mal cazar animales salvajes para comer
- 6 *I think people who object to raising animals for meat are too sentimental*
La gente que se opone a la cría de animales para producto cárnico es demasiado sentimental
- 7 *Much of the scientific research done with animals is unnecessary and cruel*
La investigación científica realizada con animales es innecesaria y cruel
- 8 *I think it is perfectly acceptable for cattle and hogs to be raised for human consumption* (*) (x)
Criar ganado para el consumo humano es aceptable
- 9 *Basically, humans have the right to use animals as we see fit* (*)
Los humanos tienen el derecho de utilizar a los animales para lo que crean conveniente
- 10 *The slaughter of whales and dolphins should be immediately stopped even if it means some people will be put out of work* (*) (x)
La matanza de mamíferos marinos (ballenas, delfines, etc.) debe parar, aunque eso implique el desempleo de muchas personas
- 11 *I sometimes get upset when I see wild animals in cages at zoos* (*) (x)
Es molesto ver animales salvajes enjaulados en los zoológicos
- 12 *In general, I think that human economic gain is more important than setting aside more land for wildlife*
Las ganancias económicas son más importantes que reservar más tierra para la vida salvaje
- 13 *Too much fuss is made over the welfare of animals these days when there are many human problems that need to be solved*
Hoy en día, con la cantidad de problemas humanos que quedan por resolver, se le presta demasiada atención al bienestar de los animales
- 14 *Breeding animals for their skins is a legitimate use of animals* (*)
La cría de animales para obtener sus pieles está justificada
- 15 *Some aspects of biology can only be learned through dissecting preserved animals such as cats* (*)
Si queremos saber sobre la biología, no hay más remedio que diseccionar animales
- 16 *Continued research with animals will be necessary if we are to ever conquer diseases such as cancer, heart disease, and AIDS*
La investigación con animales es necesaria para ampliar el conocimiento referido a enfermedades cardíacas, cáncer o SIDA
- 17 *It is unethical to breed purebred dogs for pets when millions of dogs are killed in animal shelters each year* (*)
Es inmoral criar perros de raza para venderlos como mascotas cuando millones son asesinados cada año en los refugios
- 18 *The production of inexpensive meat, eggs, and dairy products justifies maintaining animals under crowded conditions*
La producción de carne, huevos y productos lácteos a un precio más económico justifica el hecho de que se mantengan a los animales en granjas intensivas
- 19 *The use of animals such as rabbits for testing the safety of cosmetic and household products is unnecessary and should be stopped* (*)
El uso de animales para probar la seguridad de los cosméticos y los productos domésticos es innecesario y debe detenerse
- 20 *The use of animals in rodeos and circuses is cruel*
El uso de animales en fiestas populares y circos es cruel

Note: items with (*) are from the 10 items version, and the ones with (x) belong to the 5 items version.

Appendix B Original items in English and adapted in Spanish of the SS

1. *Morally, animals always count for less than humans*
Moralmente los animales tienen menos valor que los humanos
2. *Humans have the right to use animals however they want to*
Los humanos tienen derecho a usar a los animales como quieran
3. *It is morally acceptable to keep animals in circuses for human entertainment*
Utilizar animales en circos y espectáculos para el entretenimiento humano es moralmente aceptable
4. *It is morally acceptable to trade animals like possessions*
Comerciar con animales como si fueran bienes es moralmente aceptable
5. *Chimpanzees should have basic legal rights such as right to life or a prohibition of torture*
Los animales deberían tener derechos legales básicos, como el derecho a la vida y la prohibición de actos de tortura hacia ellos
6. *It is morally acceptable to perform medical experiments on animals that we would not perform on any human*
Realizar experimentos médicos en animales que no haríamos en humanos es moralmente aceptable