

# Attitudes towards love: A cross-cultural study between the Ukraine and Spain

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## ABSTRACT

This study presents the translation and validation of the Love Attitudes Scale-Short Form (LAS-SF) to the Ukrainian and Spanish context. In addition, a comparative analysis is performed on the love styles shown by a sample of 611 people, of which 346 were residents of the city of Almería (Spain) and 259 were residents of Lviv (Ukraine). The results show good psychometric characteristics for the scale and a factorial invariance between the groups of origin, while preserving the original six-factor structure. Regarding the love styles, similarities are identified between the Spanish and Ukrainians in the importance of ludic (playful) love and the low importance of physical attraction or passionate love. In terms of differences, one can see that ludic, friendly, and pragmatic love styles are significantly higher in the Ukrainian population while obsessive love appears more valued in the Spanish

## RESUMEN

*Actitudes hacia el amor: un estudio transcultural entre Ucrania y España*

*Este estudio presenta la traducción y validación de la Love Attitudes Scale-Short Form (LAS-SF) al contexto ucraniano y español. Además, se realiza un análisis comparativo de los estilos amorosos mostrados por una muestra de 611 personas, de las cuales 346 eran residentes en la ciudad de Almería (España) y 259 en Lviv (Ucrania). Los resultados muestran buenas características psicométricas para la escala y una invarianza factorial entre los grupos de procedencia, conservando la estructura original de seis factores. En cuanto a los estilos amorosos, se identifican similitudes entre españoles y ucranianos en la importancia del amor lúdico (juguetón) y la escasa importancia de la atracción física o el amor apasionado. En cuanto a las diferencias, se observa que los estilos de amor lúdico, amistoso y pragmático son*

population. Religion is related to significantly diminishing the obsessive love styles. The differences between the Spanish and Ukrainian groups give an account of some of the cultural similarities and differences that exist regarding conceptions of love in the interior of the European continent and that, according to the data, might be related to the role that religion plays in these societies.

**Keywords:** attitudes towards love, gender, religion, relationships.

*significativamente superiores en la población ucraniana, mientras que el amor obsesivo aparece más valorado en la población española. La religión está relacionada con la disminución significativa de los estilos de amor obsesivo. Las diferencias entre los grupos español y ucraniano dan cuenta de algunas de las similitudes y diferencias culturales que existen respecto a las concepciones del amor en el interior del continente europeo y que, según los datos, podrían estar relacionadas con el papel que juega la religión en estas sociedades.*

**Palabras clave:** actitudes hacia el amor, género, religión, relaciones.

## 1. INTRODUCTION

Love is one of the most complex phenomena to study due to the great multiplicity of emotions, behaviours and attitudes involved (Sirin, Dashdamirov, and Ummet, 2015). All these manifestations are, in turn, modulated and constructed historically, ideologically, socially and culturally, and vary and evolve with each individual experience (Ubillos, Páez, and Zubieta, 2005). It can also be considered a cross-cultural phenomenon, insofar as the love experience is described the world over (Sorokowski, et al. 2021); however, it is also cultural and contextual, given that the meanings and practices differ. Accordingly, comparative studies are fundamental to understanding how links are articulated and sustained in different sociocultural groups and, to a certain extent, this allows us to characterize the societies in which they take place (Blandón-Hincapié and López-Serna, 2016).

The complexity and polysemy of the term has allowed different approaches to develop in the conceptualization of love (Munk and Kronenfeld, 2015; Sternberg and Weis, 2006). In Europe, since the beginning of the 20th century, the most influential currents of thought on love are found in theological (Nygren, 1932) and psychoanalytic (Freud) studies. Freud presents love as a libidinal energy that is produced in the process of shaping the self and identifies the origin of desire for the other as coming from the recognition that one is lacking. Around the '70s, conceptualizations from social psychology and psychosocial approaches became relevant; these had a functionalist influence, analysing love styles as a universal reality and as a social and cultural construction, adapted to societies, which held that each society manifested

love in different ways depending on the work that society played in its own maintenance (Feybesse and Hatfield, 2019). In the '80s, biological approaches also began to gain great importance; these tried to show the neurophysiological bases of love, especially the cerebral and hormonal, and the role of the love experience in our species' development and survival. In parallel, a historical-cultural approach also developed, based on the role that discourses and love practices have played in sustaining social relationships in order to perpetuate domination and exploitation. The materialist and historical-cultural approaches have been related with a fourth postmodern approach, a more culturalist approach that basically developed from cultural anthropology and feminist studies; this has focused on describing the construction of loving subjectivities and critical discourses on loving forms free of violence.

### **The measurement of love from the sociocultural psychology approach**

The different theories and models on the components, dimensions and styles of love have served as the basis for the development of different measurement scales. This interest in measuring and comparing culturally has been capitalized on by sociocultural psychology, with Lee's (1973, 1977) analysis of love in Greece - this is one of the main comparative resources that allowed six love "styles" to be identified in different contexts. Subsequently, Hendrik, Hendrik, and Dicke would adapt those six styles into a measurement scale. In 1985, Hatfield and Walster developed a different love model in which they distinguished between passionate love, which was more intense, and companion love, which was more affective (Berscheid and Walster, 1969; Hatfield and Rapson, 1996/2005; Feybesse and Hatfield, 2019). The self-expansion model of love theory also appears (Aron and Aron, 1986) and the adaptations to Attachment Theory applied to romantic love, which define secure and insecure love relationships - anxious-dependent and avoidant (Bowlby, 2012; Hazan and Shaver, 1987). That same year, Sternberg published what is probably the most widespread love theory: the triangular theory of love (Sternberg, 1988, 2006, 2019). This theory holds that there are three basic components of love, which can be represented in a triangle: intimacy, passion, and commitment.

Hendrik, Hendrik, and Dicke's (1986) adaptation of Lee's model of the six loving styles or "colours" allows a love attitudes scale to be developed. From the study on love in Greece, John Lee defined three "primary" forms of love: 1. Eros - which refers to passionate love, in which physical attraction and sexual desire are characteristic. 2. Ludus - where love is understood as games, entertainment and fun. Ludus love - playful attitudes towards love - can accompany various relationships. 3. Storgē - which describes forms of brotherly and companion love, in which intimacy is the central element. This is a form of love that is described coincidentally with friendship, since what is important is loyalty, honesty and maturity. Lee defined three

other love styles, arising as permutations of those above: 4. Prâgma - (a combination of ludus and storgē) considers pragmatic and rational love forms that can be influenced by economic aspects, family, dependent children, and work. There may be instrumental or utilitarian decisions to choose or keep the partner. There are also common interests. 5. Mania - (a combination of érōs and ludus) describes possessive, obsessive, jealous and dependent forms of love, which are turbulent and intense. They tend to reproduce myths such as that of complementarity and the lack of a future without the partner. 6. Agâpē - (a combination of érōs and storgē) presents a charitable and disinterested love, characterized by a tendency to forgive and support the partner despite faults or defects. There is usually sacrifice, dedication, commitment and affection because the central focus is the well-being of the loved one. The Hendrick and Hendrick (1986) scale of 42 items empirically corroborated the six-factor structure, which corresponded to six types of attitudes towards love: erotic, playful, friendly, practical, obsessive and charitable. Subsequently, scale abbreviations have been developed.

### **Cross-cultural studies on attitudes towards love**

The explanatory power of Lee's model and the psychometric characteristics of the Love Attitudes Scale (LAS) by Hendrik, Hendrik, and Dicke (1988) have given rise to numerous studies on love in different contexts and cultural groups, allowing us to know the influence of various psychological, social and cultural factors on it.

Although the LAS scale was developed and validated in the European and American contexts, it has subsequently been validated in many other non-Western countries (Yang and Liu, 2007; Meskó et al. 2021). Cultural and cross-cultural studies of love show variations between different societies, countries, and communities. Some cultural aspects that have been used to explain the differences have to do with individualistic and collectivist values as well as forms of social organization (Dion and Dion, 1988, Rohmann et al.), the differences in emotional expression and norm compliance, the differences in social institutions such as family and marriage, and the differences in gender roles in the construction of masculinity and femininity.

There are several cross-cultural studies that have analysed the differences in attitudes towards love between different geographical contexts. Jankowiak and Fischer (1992), in a review of 186 cultures, reported that there were indicators referring to passionate love in 88.5% of the cultures. The work by Sprecher et al. (1994) used the LAS scale to compare the six styles in Japan, Russia and the USA. The results showed that Americans scored higher on eros and storge, while Russians scored higher on ludus and agape. Neto et al. (2000) focused on comparing the attitudes towards love in young people from four continents, showing that in

dimensions such as eros, mania and agape, the intercultural differences were moderate, while in pragma and storge love - less strong emotions and sensitive to the cultural context - the differences were much greater: Angolans, Brazilians, Cape Verdeans, and Mozambicans were more pragmatic in their responses than were the French and Swiss. Nevertheless, cultural forms within countries retain an enormous diversity of discourses, practices and attitudes towards love among those who share the same culture. Among those aspects that have shown relevant differences within cultures are gender, age, social status, the type of relationship, and values towards the partner (Swidler, 2013).

This study tries to contribute to the cross-cultural studies on love. The decision to use the LAS-SF scale for this purpose lies in its trans-historical and trans-cultural stability (Sprecher et al., 1994; Neto et al., 2000; Swidler, 2013), which makes it a solid basis for the comparison of love between cultural groups with an increasing presence, such as the Ukrainian in Spain. To do so, it sets out to a) translate, adapt and validate the 24-item version of the love attitudes scale to the Spanish and Ukrainian populations; b) determine how the cultural context of the country of residence and religion influence the attitudes towards love held by the Spanish and the Ukrainians.

The reception of migrants from Eastern European countries (Romania, Bulgaria, Ukraine and Russia) to Southern European countries has been increasing since the 1990s by the dismantling of the Soviet economy and by the pressures of political transformation (Hosnedlová & Stanek, 2010). The high increase in migration from Romania has led to an increase in studies on Romanian migrants. However, other origins from the East (with constant but not so marked migrations) have not received the same academic treatment. Studies on the Ukrainian population in Europe are still very rare. In this sense, this research tries to analyse a community in gradual and constant increase such as the Ukrainian. It is also analysed from the need to understand cultural similarities and differences in order to create policies aimed at intercultural coexistence.

## **2. METHOD**

### **Participants**

A descriptive cross-sectional design was used for this research. A total of 605 people participated, of which 346 (57.2%) were Spanish (residing in southern Spain) and the remaining 259 (42.8%) were Ukrainians (residing in Lviv). The age of the participants was between 15 and 43 years old with a mean age of 22.23 (SD = 4.03) years. Of these, 68.8% were women and 31.2% men.

With regard to marital status, single people (48.8%) and those in an informal relationship (49.1%) predominate among the Spanish, while single (57.1%) and married people (22.4%) stand out amongst the Ukrainians. The level of education presented by the participants varied although the university studies level predominated in both groups.

With regards to religion, amongst the Spanish, the number of atheists (41.6%) and Catholics (39.3%) were higher, whereas amongst the Ukrainians, it was the Orthodox (38.6) and Catholics (36.3%). Table 1 shows that 72.3% of the Spanish considered religion to be of no importance or not very important in their lives, whereas 49% of Ukrainians consider it important or very important.

**Table 1.** General information on the Spanish and Ukrainian sample.

	Spanish (n = 346)	%	Ukrainians (n = 259)	%
<b>Gender</b>	Men	33.2%	Men	28.6%
	Women	66.8%	Women = 153	71.4%
<b>Age</b>	21.92 (SD= 3.54)		22.64 (SD = 4.58)	
<b>Marital Status</b>	Single	48.8%	Single	57.1%
	Informal Relationship	49.1%	Informal Relationship	18.1%
	Married	1.7%	Married	22.4%
	Widowed	0%	Widowed	0.4%
	Divorced	0.3%	Divorced	1.9%
<b>Educational Level</b>	Secondary	13.6%	Secondary	0.8%
	Baccalaureate	5.8%	Baccalaureate	18.1%
	Intermediate level	9.8%	Intermediate level	0.8%
	University	55.5%	University	47.5%
	Master's	14.7%	Master's	31.3%
	PhD	0.6%	PhD	1.5%
<b>Religion</b>	Catholic	39.3%	Catholic	36.3%
	Muslim	0.6%	Orthodox	38.6%
	Buddhist	0.6%	Agnostic	5.8%
	Agnostic	17.6%	Atheist	8.5%
	Atheist	41.6%	Protestant	1.9%
	Other	0.3%	Other	8.9%
<b>Importance of religion</b>	Unimportant	52.6%	Unimportant	14.3%
	Not very important	19.7%	Not very important	10.8%
	Indifferent	18.2%	Indifferent	25.9%
	Important	5.8%	Important	25.1%
	Very Important	3.8%	Very Important	23.9%

**Table 1.** Profile of the educators who were interviewed.

Sociodemographic data on gender, age, nationality, education level, the religion professed, how important religion is in one's life and marital status, the data have been obtained through the Love Attitudes Scale-Short Form (LAS) (Hendrik, Hendrik and Dicke, 1998). The original scale consisted of 24 items that measure attitudes towards the six types of love: Eros (physical attraction), Ludus (playful love), Storge (friendly love), Pragma (pragmatic love), Mania (obsessive love) and Agape (altruistic love). This is Likert-type scale in which 1 corresponds to "completely agree" and 5 to "completely disagree". The scale was cross-culturally translated into Spanish and Ukrainian. A direct and inverse translation was carried out, following the recommendations of Wild et al. (2005). The translation into Spanish was carried out by a native English speaker who knows Spanish and by a Spanish person with a command of English, after which it was translated back into English and supervised by a US teacher of Latino origin. The Ukrainian translation was carried out by three people of Ukrainian origin, who are resident in Spain. A back translation was also carried out. No problems were identified in the translation process of the items.

### **Procedure**

The sample was compiled through non-probability sampling using the self-selected sample technique (Sterba and Foster, 2008). The questionnaires were applied through the Google Drive platform, and disseminated through social networks, such as Facebook, Instagram and WhatsApp. This online distribution was a result of the Covid-19 pandemic as well as the geographical distance between the Ukraine and Spain. Once the data were obtained, a review was carried out to eliminate those data that did not meet the inclusion criteria: being Spanish or Ukrainian, and having, or having had, a partner in the last six months.

### **Ethical criteria**

The questionnaire's description states that the data obtained are totally anonymous and will not be used for any other purpose other than the study, as set out in Organic Law 3/2018, of December 5, on the protection of personal data and the guarantee of digital rights. This research lies within a broader investigation that was approved by the Bioethics Committee of the University of Almería.

### **Data analysis**

Confirmatory factor analysis was employed to test the factorial models using the AMOS 22 programme. The maximum likelihood estimation method was employed to test the model's fit,

for which several indices were used (Byrne, 2001): for the CMIN/DF (minimum discrepancy per degree of freedom), values lower than 3 are considered indicators of acceptable model fit (Kline, 2005); for the TLI (Tucker-Lewis Index), IFI (Incremental Fit Index) and CFI (Comparative Fit Index), values above .90 are recommended (Kline, 2005); and for RMSEA (Root Mean Square Error of Approximation), the recommended values are between .05 and .08 (Hair, Anderson, Tatham, and Black, 1995). The evaluation of invariance was carried out following a pattern of analysed models in which restrictions are added as the number of parameters compared between the groups increases. To conclude the level of invariance, the fit of the nested models was compared using the difference between the CFI values. If the difference value between two nested models was greater than .01 in favour of the least restrictive model, the model with more restrictions should be rejected (Cheung and Rensvold, 2002). Subsequently, the parameter values were analysed to identify those that gave rise to the model's non-invariance. Four models were designed. The analysis began by evaluating: (1) the model's configural invariance (M1 without restriction), from which the rest of the models were compared, (2) the model's metric invariance (M2, with a restriction in the factorial loads), (3) the model's scalar (or strong) invariance (M3, incorporating the equality of the intercepts) and (4) the model's residual (or strict) invariance (incorporating the error variances).

Descriptive and inferential calculations were performed using SPSS 26. The data were found to follow a normal distribution, based on skewness and kurtosis. The skewness and kurtosis values for the dependent variables in these analyses were between - 2 and + 2, and thus, can be considered acceptable for proving normal univariate distribution (Field, 2009; Gravetter and Wallnau 2014). Finally, once the factorial invariance was verified, the ANOVA was performed, analysing the type of love according to nationality and the importance of religion in the participants' lives. The effect size was measured with  $\eta^2$ , in which it was considered to have little effect at around 0.01, a moderate effect at around 0.06 and a large effect at 0.14.

### 3. RESULTS

#### Analysis of the LAS items by experts

The 24 items were evaluated by 3 sexology experts and 2 research methodology experts, determining the content validity index (CVI) of each statement and question. For this, the proposal by Lawshe (1975) was followed, based on a group of five experts assessing each of the test items, for which: 1 = "unnecessary"; 2 = "useful"; and 3 = "essential". Only the Mania item, "I can't relax if I suspect that my partner is with another person," was eliminated, as all the experts valued it as poor. The applied LAS scale is made up of 23 items, divided into six types of love.



### Confirmatory factor analysis

Thompson (2004) recommends that when confirmatory factor analysis is used, not only the fit of a theoretical model should be corroborated, but it is also advisable to compare the fit indices of several alternative models to select the best one. In this sense, the overall results of the confirmatory factor analysis indicated that the measurement model in the LAS-Short Form scale of 23 items was not acceptable. The analyses of the standardized factorial loads (Standardized Regression Weights) and the multiple square correlations (Squared Multiple Correlations) were well below the 0.50 value so, according to Calvo (2017), these estimated values should not be accepted. Consequently, the 4 items from the scale already reviewed by the experts whose Squared Multiple Correlation did not attain this value were eliminated - from the Ludus type of love, the items “I think that what my partner does not know about me will not hurt him” and “My partner would be upset if he knew some of the things that I have done with other people”, from the Storge type of love, the item “Love is really a deep friendship, not a mystical or mysterious emotion” and from Pragma, the item “Before getting too involved with a person, I try to find out if their genetic inheritance is compatible or not with mine, in case we decide to have children”. The definitive validated LAS scale for the Spanish and the Ukrainians is made up of 19 items.

In the final model applied to the total sample and to each of the nationalities studied (Spanish and Ukrainian) (Table 2), it is observed that the goodness-of-fit indicators for the CFI (comparative fit index), IFI (Incremental Fit Index) and TLI (Tucker-Lewis index) were greater than 0.90, the RMSEA (the root mean square error of approximation) was less than 0.08 (90% CI <0.10) and the CMIN/DF was less than 3. Therefore, the model presents an acceptable fit confirming the 6-factor structure; that is, the six types of love described by Hendrik, Hendrik and Dicke (1998) are maintained.

**Table 2.** Fit indices of the LAS-Short Form model with 19 items applied to the total sample and to each of the nationalities studied: Spanish and Ukrainian.

Absolute indices		Incremental indices			Parsimony
$\chi^2$	RMSEA	IFI	TLI	CFI	CMIN/DF
Factorial solution for all participants					
280.9*	.048	.932	.903	.930	2.051
Factorial solution for the Spanish participants					
232.31	.054	.907	.864	.902	1.696
Factorial solution for the Ukrainian participants					
200.94	.047	.949	.926	0.946	1.46

$\chi^2$  = Chi-square; \* P<.01, RMSEA = Mean Square Error of Approximation, 90% CI = 90% Confidence Interval of RMSEA; CFI = Comparative Fit Index; IFI = Incremental Fit Index. CMIN/DF = Chi-square divided by the degrees of freedom.

All factor loadings and factor correlations were statistically significant ( $p < 0.05$ ) and the standardised factor loadings were  $\geq 0.30$  in absolute value. Table 3 shows the standardised factor loadings of the items incorporated in each factor.

**Table 3.** Table Standardized factor loadings.

	Eros	Ludus	Storge	Pragma	Mania	Agape
Between me and the person I love there is chemistry	.79					
I feel like my partner and I are destined for each other	.74					
My partner and I really understand each other	.80					
My partner conforms to my ideal of physical beauty	.61					
Sometimes I have had to hide from my partner that I had other partners (romantic relationships with other people)		.68				
I like to play the "love game" with different people		.68				
The best love relationship arises from a long friendship			.62			
It is difficult to say exactly when my partner and I felt we fell in love			.56			
My most satisfying love relationship has grown out of a good friendship			.87			
One question to consider when choosing a partner is whether or not he / she will harm my family				.62		
An important question when choosing a partner is whether or not they have good parents				.58		
One question to consider when choosing a partner is whether or not it will harm my career				.70		
When my partner does not pay attention to me, I feel bad					.53	
When I am in love, I have trouble concentrating on anything else					.53	
If my partner ignores me, I sometimes do unintelligent things just to get their attention					.70	
I would rather suffer than my partner suffer						.63
I cannot be happy if my partner is not happy						.63
I generally sacrifice my own wishes for my partner to fulfil their wishes						.65
I would give everything for my partner						.72

The results of the discriminant validity are presented in the table 4, which concludes that all latent variables meet the divergence condition. According to Fornell and Larcker (1981), for discriminant validity to be fulfilled, the average variance extracted (AVE) of each latent variable must be greater than the square of the correlations between that latent variable and each of the others.

Table 4. Discriminant validity study.

	Eros	Ludus	Storge	Pragma	Mania	Agape
Eros	<b>.548</b>					
Ludus	.27	<b>.463</b>				
Storge	.005	.0004	<b>.486</b>			
Pragma	.029	.016	.017	<b>.404</b>		
Mania	.017	.067	.010	.0009	<b>.351</b>	
Agape	.176	.102	.0009	.09	.096	<b>.440</b>

\*The bold number represents the AVE, the others the value of the squared correlation between latent variables.

### Factorial invariance by nationality

Table 5 shows the fit indicators obtained in the multi-group CFAs according to nationality. The goodness of fit for models 1, 2 and 3 is good (CFI > .90, IFI > .90, and RMSEA < .06 and the AIC shows no significant variations between one model and another) and do not exceed the recommended cut-off points in the increasingly restrictive model comparison for RMSEA ( $\Delta > .015$ ), CFI ( $\Delta > .01$ ), and IFI ( $\Delta > .01$ ). When comparing the fourth model with the third, the only parameter that meets the cut-off points is RMSEA ( $\Delta = .013$ ). Therefore, configural, metric, and strong invariance exists.

Table 5. Analysis of invariance by nationality for the Love Attitudes Scale (LAS)

	$\chi^2$	df	RMSEA	CFI	IFI	AIC	RMSEA	CFI
Model 1	433.26*	274	.036	.927	.930	721.26		
Model 2	453.12*	287	.036	.923	.926	715.12	0	-.004
Model 3	494.52*	308	.037	.914	.917	714.52	.001	-.009
Model 4	703.46*	327	.05	.826	.830	885.46	.013	-.098

Comparisons are made with the previous model: M2 with M1, M3 with M2 and M4 with M3.  $\chi^2$  Chi-square; df = degrees of freedom; RMSEA = Root Mean Square Error of Approximation; CFI = Comparative Fit Index; IFI = Incremental Fit Index; AIC = Akaike Information Criterion; \*  $p < .01$ .

### Reliability of the LAS Short-Form scale for Spanish and Ukrainians

The Composite Reliability values are above .70, except for Ludus, which was a factor containing only two items. (Table 6). It is observed that the highest means for the two cultural groups studied are for ludic love, and the lowest score is obtained by Ukrainians for the eros type of love.

**Table 6.** Mean scores, standard deviation and reliability of the Love Attitudes Scale for Spanish and Ukrainians.

	Spanish			Ukrainians		
	M SD	$\alpha$	CR	M SD	$\alpha$	CR
Eros (Physical attraction)	2.40 .92	.759	.798	2.12 .99	.876	.800
Ludus (Playful/ludic love)	4.11 1.16	.521	.690	4.43 1.01	.725	.680
Storge (Friendly Love)	3.11 1.11	.767	.747	3.28 1.04	.722	.750
Directive (Pragmatic love)	3.19 1.07	.629	.740	3.78 1.00	.670	.738
Mania (Obsessive love)	3.20 .94	.613	.744	2.77 .96	.563	.748
Agape (Altruistic Love)	2.64 .90	.722	.798	2.54 .98	.795	.796

$\alpha$  = Cronbach's Alpha; CR = Composite Reliability

### ANOVA according to the nationality and importance of religion in the lives of the participants.

The ANOVA informs us that there are significant differences by nationality in playful love, friendly love, pragmatic love, and obsessive love. Ukrainians score higher than the Spanish in playful love, friendly love, and pragmatic love, the effect size being small in playful and friendly love, and moderate in pragmatic love. In contrast, the Spanish present more obsessive love than Ukrainians, although the effect size is small (Table 7). If we analyse the importance of religion, we see that there are only significant differences in obsessive love. Gabriel's post hoc test shows significant differences between people who consider religion not to be important in their lives when compared with those who show indifference to religion ( $p < .05$ ), those who consider it important ( $p < .01$ ) and those who consider it very important ( $p < .01$ ), although the effect size is small.

**Table 7.** Differences in the types of love according to the nationality, importance of religion and nationality\*religion

	Nationality			Importance of religion			Nationality * religion		
	F		$\eta^2$	F		$\eta^2$	F		$\eta^2$
Physical attraction	2.733	.099	.005	2.166	.071	.014	1.968	.098	.013
Ludic love	6.669	.010	.011	.50	.736	.003	1.539	.189	.01
Friendly love	6.295	.012	.01	.735	.568	.005	.554	.696	.004
Pragmatic love	34.843	.000	.055	.663	.618	.004	1,029	.391	.007
Obsessive love	10,557	.001	.017	2.989	.018	.02	1,410	.229	.009
Altruistic love	.277	.599	.000	1.21	.305	.008	1,000	.407	.007

## 4. DISCUSSION

Studies of translation and cross-cultural validation in love try to translate and adapt scales culturally and to analyse whether factorial invariance occurs between the scores obtained on the scales by groups of people residing in different cultural contexts. The intention is to establish whether the developed scale can be validly applied in different countries, for which an equivalence of the love construct must exist in the social groups studied. In this case, the 24-item version of the Love Attitudes Scale (Hendricks, 1986 and 1998) for Spanish and Ukrainians has been translated and cross-culturally validated, and the results obtained support an equivalence in the scale's factorial structure as a function of the country.

During the cross-cultural validation process, 19 of the 24 items remained constant, while 5 were discarded. In the content validation by experts, an item belonging to the mania dimension was discarded: "If my partner ignores me for a while, sometimes I do unintelligent things to try to regain their attention" due to its inadequacy in measuring manic love in cross-cultural contexts. It must be taken into account that the ways of attracting attention are socioculturally marked behaviours, which vary between contexts. For this reason, the questionnaire that was administered to the participants consisted of 23 items (annex 1). In turn, following the confirmatory factor analysis, the items "I think that what my partner does not know about me will not hurt him" and "My partner would be upset if he knew some of the things that I have done with other people" were discarded from the ludus dimension, the item "Love is really a deep friendship, not a mystical or mysterious emotion" was discarded from storge and the item "before getting very involved with a person, I try to find out if their genetic inheritance is compatible or not with mine, in case we decide to have children" was discarded from pragma. The elimination of these items may suggest some transformations in the understanding of contemporary relationships today, such as the transformations taking place around the notion of privacy and intimacy, especially marked by the changes that technologies have brought about. As with the items reflecting a mystical understanding, or models focused strongly on reproduction, they remain outside a relational logic influenced by the fragilization of romantic love models, more liquid and more unstable love forms, and more linked to an instrumental rationality.

The confirmatory factor analysis on the 19-item scale revealed that the data for both the total sample and for each of the nationalities studied (Spanish and Ukrainian) adequately fitted the proposed measurement model with the 6-factor structure of love, thus maintaining the six types of love described by Hendrik, Hendrik and Dicke (1998). The structure's persistence

based on the six factors or love styles remains consistent with other cross-cultural studies (Todosijević et al. 2009; White et al., 2004, Neto et al., 2000). Likewise, the multigroup CFA as a function of nationality showed factorial invariance between the Spanish and Ukrainians. According to this test, the scale could be applied to different groups, allowing means between different groups to be compared and an effective conclusion reached.

Regarding the internal consistency of the scores in each of the love dimensions, the composite reliabilities were acceptable (0.68 to 0.80) in both the Spanish and Ukrainian samples. With all of the above, we can conclude that our translated and adapted version for the Spanish and Ukrainian populations presents satisfactory psychometric properties and measurement invariance in the 2 samples, so its use appears to be effective at measuring love in these contexts.

Regarding the study's second objective, focused on knowing and comparing the love styles of the Spanish and Ukrainian populations, we can observe the existence of similarities but also clear differences between the two groups. Among the similarities appreciated between the Spanish and Ukrainians, one can see that the ordering of the love styles (or dimensions) is maintained according to their degree of importance, in addition to maintaining the six love styles. So, there is a greater tendency towards ludic love in both groups, with this aspect being the most valued. This is followed by pragmatic love and friendly love, with those aspects of obsessive love being found in fourth place. In contrast to the study by Jankowiak and Fischer (1992), the two lowest scored aspects were for the dimensions related to altruistic love and physical or erotic attraction. This coincidence reveals certain constants, such as the centrality of the ludic dimension in contemporary relationships, with scores practically double (on average) those of physical attraction (eros). These results coincide with the findings of studies carried out by Hendrick and Hendrick (1986), Sprecher, et al (1994), and Ubillos, Ráez and Zubieta (2005) in which they identify ludic love and pragmatic love as the most widely accepted love styles, these having an upward trend. And yet, it contrasts with other studies carried out in the Spanish context that give far less importance to ludic love (Yela, 2012; Ferrer et al., 2008; Rodríguez-Santero, García-Carpintero Muñoz and Porcel Gálvez, 2017). The great importance attached to playful love and the low importance attached to physical attraction in both the Spanish and the Ukrainians is noteworthy, precisely because it contrasts with the results of numerous comparative studies such as the ones carried out in India and the United States (McCutcheon et al. 2017), and that of Neto (2007) comparing the UK, India and Portugal, in which eros is the most valued dimension and ludus is the least. These changes may suggest a change in the love trend, in the same direction that we pointed out previously. Some studies on the impact technologies are having on love relationships seem to point in that di-

rection - decreased passion and the understanding of relationships as an interchangeable and ephemeral game. McCutcheon et al. (2017) observed that the young people who score higher in ludic love have more admiring attitudes towards famous people. This might demarcate the influence of the media on changes in love styles.

Regarding the differences between the Spanish and Ukrainians, the ludic, friendly and pragmatic love styles obtain higher scores (that are statistically significant) in the Ukrainian population, whereas obsessive love and (in a marginally significant way) physical attraction score higher in the Spanish population. This differentiation between ludus, pragma and storge on the one hand, and mania and storge on the other, coincides with the analysis by Neto et al. (2000), in which it is possible to maintain these groupings between styles. Conversely, the differences in love models suggest the importance of certain cultural factors between contexts. If we turn to recent cross-cultural studies between the Ukraine and Spain carried out by the Gertz Hoefstde Study Center (2015), we find that Spanish values score much lower in long-term orientation and score much higher in indulgence. In accordance with these values, it is manifested that Ukrainian society is more future-oriented, more pragmatic and less impulsive while the Spanish society has higher levels of containment. The Spanish context is more favourable to impulsiveness, short-term decisions and more hedonistic in the sense that it allows the expression of natural desires. Along these lines, the cross-cultural studies of Galinha et al. (2014) and Levine et al. (1995) coincide in identifying that, in the more collectivist and Latin-influenced populations, passionate and manic love are more important, as these populations are subject to greater emotionality.

Another aspect that allows us to explain the differences between the Spanish and Ukrainians regarding obsessive love is related to the role that religion plays. The results confirm the role of religion in significantly reducing obsessive love; that is to say, religiosity reduces the manifestation of that love style. If, in addition to this, we pay attention to the differences observed in the participant samples, we find clear variation: 42% of the Spanish declared themselves to be atheists compared to 8.5% in the Ukrainian population. The loss of religiosity and associated values allows us to explain the greater presence of obsessive love forms among the Spanish.

Finally, although religiosity is markedly different between the Spanish and Ukrainians (because the Ukraine's religious pluralism means that the number of creeds is much higher than in Spain - Orthodox, Protestant, Catholic, etc.), the numbers of people who identify as Catholic are similar in the two countries. This similarity in Catholicism may be related to the absence of significant differences in altruistic love.

## Limitations

Although the present study makes several relevant contributions, there are a number of drawbacks that should be pointed out. The first, and probably most obvious, is the research sample. This is a modest sample with an uneven distribution of Spanish and Ukrainian participants. The second limitation is in taking the country as the unit of analysis and comparison, which might obscure our understanding of the internal diversity that exists within the compared communities. The third and final limitation is one typical to cross-cultural studies, namely the difficulty of making total cross-cultural adaptations to the measurement instruments, especially relating to sensitive topics such as love and affective sexual relationships. Thus, despite our efforts to adapt the scale, linguistic-cultural patterns might still exist in our understanding of it.

## 5. CONCLUSION

This study makes a contribution on two levels. On the one hand, it provides an adaptation and validation of the Love Attitudes Scale to the Spanish and Ukrainian context and, on the other, it allows us to delve into the different forms and manifestations of love that occur within the European continent, which many cross-cultural studies have tended to homogenize up until now. Furthermore, the migration routes and networks connecting Mediterranean countries to those of Eastern Europe are being consolidated, thus creating a new migratory reality that must be considered when drawing up public policies and socio-educational programmes.

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