The Spanish Adaptation of the Interpersonal Sexual Objectification Scale (ISOS)

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Abstract

Background: Sexual objectification of women is a common practice in Western countries (Calogero, 2013), where it is believed that being a woman implies being treated as a sexual object or a body to be looked at and evaluated (Noll & Fredrickson, 1998). Sexual objectification refers to the reduction of a woman to her body or body parts, with the misperception that the body or body parts reflect the whole person (Bartky, 1990).

In our society, women’s bodies are often objectified by the media and in social interactions through appearance-related comments, unwanted touching and degrading acts of a sexual nature (Davidson, Gervais, Canivez, & Cole, 2013). Objectification theory, as formulated by Fredrickson and Roberts (1997), explains that sexual objectification experiences often occur in different contexts and is one of the most common relationships between men and women. These experiences are classified as follows:

- Body evaluation, which can be defined as an observer’s analysis and evaluation of a woman’s body; and unwanted explicit sexual advances, which involve a behavior of explicit advances of a sexual nature without a woman’s consent, such as sexual harassment (Fredrickson & Roberts, 1997).

The importance of the study of both types of objectification behavior is sufficiently supported by empirical evidence because one in two women will experience some form of sexual harassment during their lifetimes (Pina, Gannon, & Saunders, 2009). For example, it has been shown that the evaluation of women’s bodies is related to the tendency to assign less-human traits to women (Hefflick, Goldenberg, Cooper, & Puvia, 2011), which may facilitate severe sexual violence (Rudman & Mescher, 2012). On the other hand, unwanted explicit sexual advances are not themselves sexual harassment behavior, and it has been amply demonstrated that their occurrence has serious psychological, physical and social consequences for the victims (Expósito, Herrera, & Lozano, 2014; Neall & Tuckey, 2014).

Taken together, the various manifestations of sexual objectification can be considered as manifestations of sexist ideology (Swim, Hyers, Cohen, & Ferguson, 2001). Specifically, the continuous body evaluation to which women are subjected...
influences women’s own perception of themselves as sexual objects (auto-objectification) promoting sexist ideology in women and perpetuating the status quo between men and women (Calogero & Jost, 2011).

The influence of sexual objectification on women’s well-being has been extensively studied (Tiggemann, 2011), and those studies have demonstrated the harmful effects of sexual objectification on physical, psychological and social well-being (Newheiser, LaFrance, & Dovidio, 2010). Due to the threat that they pose to women’s safety, the most severe sexual objectification experiences, such as explicit sexual advances, may both increase women’s state of anxiety and predict lower self-esteem (Calogero, 2004; Choma, Visser, Pozzebon, Bogaert, Busseri, & Sadava, 2010; Szymanski, Moffitt, & Carr, 2011).

With the aim of studying sexual objectification in interpersonal relationships, various measures have been developed intended to assess the frequency with which women are facing this type of experience in their daily lives: the Schedule of Sexist Events (SSE) (Klonoff & Landrine, 1995), the sexual objectification subscale of the Daily Sexist Events Scale (Swim, Cohen, & Hyers, 1998), and the Interpersonal Sexual Objectification Scale (ISOS), prepared by Kozee, Tylka, August-Horvarth and Denchik (2007).

The SSE scale (Klonoff & Landrine, 1995) assesses the frequency with which a woman is a victim of sex discrimination such as, inter alia, sexist remarks and discriminatory events at work or school.

The sexual objectification subscale pertaining to the Daily Sexist Events Scale (Swim et al., 1998) includes comments of a sexual nature (e.g., offensive allusions to specific body parts or clothing and threats of sexual contact) and behavior of a sexual nature (e.g., looks and touches).

Finally, the ISOS (Kozee et al., 2007) aims to evaluate the two forms of interpersonal sexual objectification described in the original theory: Body Evaluation and Unwanted Explicit Sexual Advances.

The advantages of the ISOS over other scales to assess the frequency with which women are victims of interpersonal sexual objectification experiences are numerous: (a) it identifies incidents of interpersonal sexual objectification without labeling them as such, preventing resistance from women themselves to being labeled as victims of such discrimination (Calogero, Tantleff-Dunn & Thompson, 2010); (b) it assesses the dimensions of sexual objectification as proposed by the authors of the sexual objectification theory (Fredrickson & Roberts, 1997); (c) it has a high predictive value of the psychological consequences of sexual objectification (Kozee et al., 2007); (d) it has been validated in different populations of women and men (Davidson et al., 2013); and (e) the scale does not correlate with social desirability, thus eliminating a potential source of error in the evaluation of the construct (Calogero et al., 2010).

Psychometric data from the ISOS (Kozee et al., 2007) show adequate psychometric properties in the US sample used for the study.

In Spain, there is no instrument to assess female sexual objectification in interpersonal relationships, despite the growing research on the effect of this variable on psychological, physical and social consequences of sexual objectification, which is why it is considered appropriate to adapt and validate the ISOS, given the advantages discussed above.
authors show adequate validity evidence related to other variables. Examples of items in the subscale of benevolent sexism include “In case of a disaster, women must be rescued before men” and “Women should be cherished and protected by men”; items in the subscale of hostile sexism include “Women are too easily offended” and “Deep down, feminist women intend for women to have more power than men.”

Procedure
First, for the purpose of translating and adapting the ISOS to Spanish culture, the steps proposed by Múñiz, Elosúa and Hambleton (2013) were followed:

1. The translation of the items in the ISOS into Spanish by a group of experts in the field, following a process of reverse translation. The translation from the source language (English) to the target language (Spanish) was conducted by a bilingual professional. Starting from this version, the reverse translation was carried out by another bilingual person not involved in the above process. The accuracy of the translation was judged by the degree of coincidence with the original version (Hambleton, 2005), making changes to those items for which the results indicated it was necessary to do so.

2. Content validity was determined from the qualitative assessment of the items by expert judgment (Sireci & Faulkner-Bond, 2014). Each expert was given a table of item specifications (Spaan, 2006), showing both the semantic definition of the construct and its components. Subsequently, a list of items designed to assess such components was shown to the judges. The task was to judge each item on understanding and belonging.

| Table 1 |
| Spanish version of the Interpersonal Sexual Objectification Scale (ISOS) (Kozee, Tylka, August-Horvarth, & Denchik, 2007) |

Por favor, piense detenidamente acerca de sus experiencias en el ÚLTIMO AÑO y responda a las preguntas de acuerdo con la siguiente escala:[Please think carefully about your experiences in the PAST YEAR and answer the questions according to the following scale:]

<table>
<thead>
<tr>
<th>Scale</th>
<th>1</th>
<th>2</th>
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<tbody>
<tr>
<td>Nunca [Never]</td>
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<td>Rara vez [Rarely]</td>
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<tr>
<td>Ocasionalmente [Sometimes]</td>
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<tr>
<td>Frequentemente [Often]</td>
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<tr>
<td>Siempre [Always]</td>
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* ¿Con qué frecuencia te han silbado mientras caminas por la calle? [How often have you been whistled at while walking down a street?]
* ¿Con qué frecuencia has notado que alguien te mira los pechos cuando estás hablando contigo? [How often have you noticed someone staring at your breasts when you are talking to them?]
* ¿Con qué frecuencia has sentido que alguien estaba evaluando tu apariencia física? [How often have you felt that someone was evaluating your physical appearance?]
* ¿Con qué frecuencia has sentido que alguien estaba mirando fíjamente tu cuerpo? [How often have you felt that someone was staring at your body?]
* ¿Con qué frecuencia has notado que alguien mira lascivamente tu cuerpo? [How often have you noticed someone leering at your body?]
* ¿Con qué frecuencia has escuchado comentarios sexuales groseros sobre tu cuerpo? [How often have you heard a rude, sexual remark made about your body?]
* ¿Con qué frecuencia te han manoseado contra tu voluntad? [How often have you been touched or groped against your will?]
* ¿Con qué frecuencia te has sentido acosada sexualmente (en el trabajo, en la escuela, etc.)? [How often have you experienced sexual harassment (on the job, in school, etc.)?]
* ¿Con qué frecuencia te has pitado mientras estabas caminando por la calle? [How often have you been honked at while walking down the street?]
* ¿Con qué frecuencia has visto que alguien se fija en algunas partes de tu cuerpo? [How often have you seen someone stare at one or more of your body parts?]
* ¿Con qué frecuencia has escuchado sin querer, a otros, hacer comentarios sexuales sobre tu cuerpo? [How often have you overheard inappropriate sexual comments made about your body?]
The response format of the items was kept as a graded scale of 5 alternatives (Lozano, García-Cueto, & Muñiz, 2008), to evaluate the frequency with which the statements occur.

Second, the procedure used for sample collection was through incidental collection by applying the questionnaire in places with a great influx of people, such as the bus stations in Salamanca, Madrid and Granada. The questionnaire was administered by a single investigator. The study was presented as an investigation of interpersonal relationships, and the participants were informed that the data collected would be treated as confidential and anonymous.

Data analysis

Evidence of the content validity of the ISOS scale was obtained through the judgments of experts in conducting item evaluation (Sireci & Faulkner-Bond, 2014). These judgments were conducted by six experts (three experts in building scales and three familiar with the construct to be assessed). First to be evaluated was how understandable the item was to the target population. Each expert was asked to rate the wording of the item from 1 (not understandable) to 5 (completely understandable). When this item did not reach a mean greater than 3, it was revised. With respect to the classification of items in the different theoretical dimensions (Body Evaluation and Unwanted Explicit Sexual Advances), if the item was not ranked in the same dimension by at least 4 of the 6 judges, the authors checked the questioned item again, analyzed potential problems and proposed an alternative translation that more clearly examined the theoretical dimension. The Spanish version of the ISOS derived from the above studies, which will be used for the present study, consists of 15 items. Eleven items comprise the dimension of Body Evaluation and four items comprise the dimension of Unwanted Explicit Sexual Advances.

To check the validity evidence based on the internal structure, the total sample was randomly divided into two subsamples of the same size. The mean age of the first group is 26.02, with a standard deviation of 7.61. The second subsample has a mean age of 26.26, with a standard deviation of 8.32.

Confirmatory factor analysis was performed with the first subsample. After confirming that the two-dimensional model fit well, the second sample was used to perform cross-validation. Subsequently, the total sample was used to obtain factor coefficients. In these procedures, Mplus 6.12 was used. Later, with the total sample, the ordinal reliability coefficient (Elosúa & Zambo, 2008) was calculated for each dimension, using the Factor 9.2 program. The next step, to check the validity evidence based on relations with other variables, was to calculate the correlations of ISOS dimensions with State-Anxiety, Self-Esteem, Hostile Sexism and Benevolent Sexism, correcting them by attenuation (AERA, APA and NCME, 1999). Finally, from the perspective of item response theory (IRT), the item parameters and the information function of the dimensions were calculated. For this task, the Samejima graded response model (1969) was used, implemented in Multilog. The model fit was assessed using the ResidPlot-2 program (Liang, Han, & Hambleton, 2009).

Results

Confirmatory factor analysis

The first subsample was used to check the two-factor structure proposed by the authors in the original version of the ISOS. Six measurement errors (Byrne, 2001) and both dimensions were correlated. The estimation method used was weighted least squares means and variance adjusted (WLSMV) because this method addresses the categorical nature of the items (Muthén & Muthén, 2012). The fit indices obtained were $\chi^2_{(77)}=153.587$, $p<.001$, RMSEA=0.055, 90% CI [0.042-.067], CFI=0.95 and SRMR=0.043. With the second subsample, the fit was checked after performing re-specifications in the first sample, with the following fit indices: $\chi^2_{(88)}=175.181$, $p<.001$, RMSEA=0.055, 90% CI [0.044-.066], CFI=0.96 and SRMR=0.047. All indices, except for $\chi^2$, are indicative of a good model fit (Byrne, 2001).

The fact of correlating different measurement errors must be substantially justified (Joreskog, 1993). The authors believe that these correlations may be indicative of item redundancy because these items cause responses related to the same behavior. Correlated errors pertain to items that have a strong relationship. For example, they refer to the frequency with which women have been whistled at (Item 1), the frequency with which women have been honked at from cars (Item 9), the frequency with which women have been groped (Item 7) and the frequency with which women have been grabbed or pinched against their will (Item 14). It is evident that all of the correlated errors belong to items with clear relationships.

After verifying the adequacy of the two-factor structure with the total sample, the analysis was repeated with the entire sample to obtain the estimates (see Figure 1). The fit of the model can be considered adequate: $\chi^2_{(177)}=239.034$, $p<.001$, RMSEA=0.054, 90% CI [0.046-.062], CFI=0.96 and SRMR=0.041.

![Figure 1. Factor structure of the Spanish version of the ISOS](image)
Reliability

The ordinal reliability of each dimension (Elosúa & Zumbo, 2006) was calculated, obtaining χ= 0.89 for the scale of Unwanted Sexual Advances and χ= 0.87 for the scale of Body Evaluation.

Validity evidence based on the relationship with other variables

To obtain this type of evidence, the dimension totals of the ISOS were correlated with the dimension totals assessed with the inventory (State-Anxiety, Benevolent Sexism, Hostile Sexism and Self-Esteem). These correlations were corrected by attenuation (to eliminate random measurement error in each score), as seen in Table 2.

As shown in Table 2, the Unwanted Explicit Sexual Advances dimension correlates positively with State-Anxiety because an Unwanted Explicit Sexual Advance is an unwanted behavior and thus creates some discomfort in the person receiving it. This same dimension is inversely related to Self-Esteem. The person receiving unwanted sexualized behavior may feel vulnerable and thus, her self-esteem maybe negatively affected.

The results, in line with expectations, have also shown positive correlations between the dimensions of Body Evaluation and Benevolent Sexism, so that women who perceive greater body evaluation also have greater beliefs of benevolent sexism. In contrast, body evaluation is neither related to high levels of anxiety nor to lower self-esteem scores, which could be due to the elimination of the previously mentioned negative effects of sexual objectification, with a temporary improvement in mood as the result of positive feedback and compliments about appearance (Fea & Brannon, 2006; Calogero et al., 2009). On the other hand, the lack of relationship between Unwanted Explicit Sexual Advances and greater sexist beliefs may be because they are easily recognizable as such interactions, which leads to a rejection of the beliefs associated with these sexist behaviors (Becker & Swim 2011).

Analysis from the perspective of the IRT

Using Samejima’s graded model (1969), discrimination (parameter a) and the thresholds (parameter b) were determined for each of the items in the two dimensions of the ISOS (see Table 3). All of the items in the dimension of Unwanted Explicit Sexual Advances have very high discrimination and those comprising the dimension of Body Evaluation have medium to very high discrimination, according to the criteria proposed by Baker (2001). With didactic purpose, the item discrimination index, calculated from the perspective of classical test theory, is also included in Table 3. As observed, the minimum required value of .30 is exceeded in all cases (García-Cueto & Fidalgo, 2005).

For the Body Evaluation dimension, item difficulty extends to the entire range of scores. By contrast, in the dimension of Unwanted Explicit Sexual Advances, the thresholds of the different alternatives are always positive. This might be because the items in this dimension involve behaviors that could be considered a crime, so the frequency with which women perceive/experience them is low.

A good fit of the graded response model to the data was obtained. The percentage of waste within the range considered appropriate (± 3 standard deviations) is 93.75% in the dimension of Unwanted Explicit Sexual Advances and 97.73% in Body Evaluation.

To assess the accuracy with which the evaluation is made, the information function was calculated for each dimension (see Figure 2).

As shown in Figure 2 (panel A) the greatest accuracy in the Unwanted Explicit Sexual Advances dimension is obtained when people with scores above the mean (from +0.5 to +3) are evaluated. By contrast, in the Body Evaluation dimension (Panel B), the greatest information is obtained in women who have scores ranging from -1 to +3.

### Table 3

<table>
<thead>
<tr>
<th>Item parameters from the perspective of IRT</th>
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<tbody>
<tr>
<td><strong>Unwanted explicit sexual advances</strong></td>
</tr>
<tr>
<td>ITEM</td>
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<td>7</td>
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<td>8</td>
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<td>14</td>
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<td>15</td>
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<tr>
<td><strong>Body evaluation</strong></td>
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<tr>
<td>ITEM</td>
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</tbody>
</table>

Note: ID = Discrimination Index from the perspective of Classical Test Theory; a = Discrimination Index from the perspective of IRT; b = Threshold

### Table 2

Correlation matrix of the different dimensions studied

<table>
<thead>
<tr>
<th></th>
<th>State-Anxiety (M = 11.07, SD = 5.96)</th>
<th>Benevolent sexism (M = 15.54, SD = 10.69)</th>
<th>Hostile sexism (M = 16.40, SD = 10.88)</th>
<th>Self-Esteem (M = 32.87, SD = 4.78)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Unwanted explicit advances (M = 5.42, SD = 1.87)</td>
<td>.18/ .20**</td>
<td>.16/ .07</td>
<td>.03/ .04</td>
<td>-.11/- .13**</td>
</tr>
<tr>
<td>Body evaluation (M = 27.41, SD = 6.09)</td>
<td>.07/ .07</td>
<td>.18/ .20**</td>
<td>.07/ .08</td>
<td>.06/.07</td>
</tr>
</tbody>
</table>

Note: Each cell contains the Pearson correlation obtained, followed by the correlation corrected by attenuation.

M = mean of the scale; SD = standard deviation of the scale.

** p<.001
The study of sexual objectification to which women are exposed in today’s society is important because many psychological, interpersonal and social problems are derived from it (Szymanski et al., 2011). This study has validated the ISOS (Kooze et al., 2007) in Spanish culture. This is the first instrument validated in Spanish to assess the construct of sexual objectification.

The Spanish version of the ISOS has a factor structure equivalent to the original scale (Kooze et al., 2007). Psychometric tests have shown adequate validity evidence of both the construct and the relationship with other variables, given that different dimensions of the scale are related to the same variables with which they had been linked in the literature on sexual objectification. Thus, Body Evaluation is related to greater adherence to benevolent sexist beliefs, which is consistent with previous studies showing that women exposed to greater sexism have higher levels of beliefs that perpetuate gender inequality (Barreto & Ellemers, 2005; Calogero & Jost, 2011). Additionally, reporting a greater number of Unwanted Explicit Sexual Advances has been associated with higher levels of state-anxiety and low self-esteem (Choma et al., 2010; Szymanski et al., 2011; Whealin, 2002).

The results about discrimination (parameter a) of the items comprising each of the dimensions, from the perspective of the IRT, are medium to high, indicating that they are suitable to discriminate people along the continuum studied. The information function of the two-dimensions of the ISOS shows that scores around and above the mean are more accurately evaluated. More specifically, the ISOS shows adequate reliability when evaluating women with medium and high levels of perceived Body Evaluation and who are above the mean in Unwanted Explicit Sexual Advances.

Evaluating with greater accuracy the medium and high levels of Body Evaluation is useful because greater reliability is obtained in the study of women who perceive more intense sexual objectification, which may be associated with increased vulnerability in discrimination scenarios based on sex, such as situations involving sexual abuse and harassment (Heflick et al., 2011; Rudman & Mescher, 2012). Conversely, the scale has adequate reliability for women who score high on the Unwanted Explicit Sexual Advances dimension, allowing a more accurate evaluation for women who have been victims of the most severe behaviors of sexual objectification. It is, therefore, a useful measure for the detection of potential situations of sexual harassment to which women can be exposed throughout their lives.

The primary contribution of this study is the participation of women in the general population, allowing greater generalization of the results than what would be achieved with the original scale, in which the sample was composed exclusively of college women (Kooze et al., 2007).

One of the possible limitations of the study may be the lack of verification of the ISOS’s relationship to other measures of objectification. However, to date, there are no other validated measures in Spanish to assess this construct.

Nevertheless, it is useful to have an instrument that serves to assess the frequency with which women are the victims of both the subtle manifestations of sexual objectification (body evaluation) and the most severe (unwanted explicit sexual advances), to either prevent or minimize the potential consequences for the mental health of women who may experience sexual objectification on a daily basis.


