The Spanish version of the Criminal Sentiment Scale Modified (CSS-M): Factor structure, reliability, and validity

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ABSTRACT
The purpose of this study was to translate and validate the Criminal Sentiment Scale Modified (CSS-M), which measures the criminal attitudes into Spanish. Despite the large body of research proving their importance as one of the best predictors of criminal conduct, only a few measures have been psychometrically developed and validated, and none of them are available in the Spanish language. A sample of 153 male inmates from Penitentiary Brian I of the Catalan Prison Service (Spain) participated voluntarily in the study (73.9% of Spanish nationality, mean age = 37.3) completed the final version of the Spanish adaptation. An exploratory factor analysis (EFA) and a confirmatory factor analysis (CFA) were conducted with all the scales simultaneously, showing that the underlying structure of the CSS-M was best explained by a two-factor solution: Sentiments toward the establishment and Criminality self-benefits. Moreover, a set of analyses of variance (ANOVA) was also performed, validating the scale well. According to the results of the study, it was concluded that the Spanish version of the CSS-M has satisfactory psychometric properties, enabling its potential usefulness within the legal field of Spanish-speaking countries as a key element in crime prevention.

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Versión española de la Criminal Sentiment Scale Modified (CSS-M): estructura factorial, fiabilidad y validez

R E S U M E N
El propósito de este estudio fue traducir y validar la Criminal Sentiment Scale Modified (CSS-M), que evalúa las actitudes criminales. A pesar de la cantidad de investigaciones señalando su importancia como uno de los mejores predictores de la conducta criminal, existen muy pocos instrumentos válidos y psicométricamente bien desarrollados, de los cuales ninguno está disponible en lengua española. Una muestra de 153 internos de la prisión Brian I de los Servicios Penitenciarios de Cataluña (España) participaron voluntariamente en el estudio (73.9% españoles, edad media = 37.3 años) cumplimentaron la versión final de la adaptación española. Se realizó un análisis factorial exploratorio (AFE) y después un análisis factorial confirmatorio (AFC) con todas las subescalas de forma simultánea, siendo su mejor estructura subyacente representada por dos factores: sentimientos hacia los estamentos normativos y autobeneficios criminales. Además, se realizaron varias comparaciones de medias (ANOVA) mostrando una buena validez del instrumento. Según los resultados del estudio se concluye que la versión española del CSS-M tiene adecuadas propiedades psicométricas, potenciando su utilidad en el mundo jurídico-penal de países hispanohablantes como elemento esencial para la prevención de delitos.

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One of the everlasting concerns of societies has been to come up with the best way to protect citizens from crime and prevent offenders from committing further offences. Now, from the first researchers of the late 1990s we know the precedent factors that are involved in causing crime. Research by Andreas and Bonta (1995) identified four domains that best predict the criminal conduct, including history of criminal behaviour, antisocial personality pattern, antisocial cognition, and antisocial associates, all known as the “big four”. A second set of variables with moderate association to predicting crime was family/marital circumstances, school/work, leisure/recreation, and substance abuse. The present study is based on one of the big four factors, antisocial cognition, which is defined as “attitudes, values and beliefs, and rationalizations supportive of crime” (Andrews, Bonta, & Wormith, 2006). An attitude, defined as “an evaluative process wherein the person has a disposition to respond positive or negative toward a person or object” (Ajzen, 1991), has a strong relationship with behaviour, playing a central role to make a decision at the “psychological moment”, inhibiting or facilitating an action (Ajzen & Fishbein, 2005; Maio & Haddock, 2010).

The key point is that criminal attitudes, also known as criminogenic needs (Gendreau, Little, & Goggin, 1996), are dynamic factors, thereby being changeable and amenable to treatment (Arbach-Lucioni, Martínez-García, & Andrés-Pueyo, 2012; Mandračia & Morgan, 2012; Redondo, Martínez-Catena, & Andrés-Pueyo, 2012). Andrews (1980) showed changes in criminal attitudes of offenders in contact with volunteers during an 8-week treatment whilst in the community and within a prison institution (Andrews, Young, Wormith, Searle, & Kouri, 1973). The reduction in recidivism is much higher in programmes that are concerned with criminogenic needs than in those focusing on non-criminogenic needs (Hanson & Harris, 2000). This is the fundamental reason why criminal attitudes have to be at the core of the treatment programmes in prison or in the community. Nonetheless, although this need/risk factor is inherent in traditional criminological theories such as different association (Sutherland & Cressey, 1978) and control (Hirschi, 1969), little attention has been paid to the construct “criminal attitude” in social psychology. One of the reasons is the lack of a uniform terminology. There have been many different terminologies to describe the construct “criminal attitudes”, like antisocial attitudes (Kroner & Mills, 1998), thinking styles (Walters, 2012), social cognition (Blackburn, 1993), or procriminal attitudes (Andrews & Bonta, 1995). The most suitable way to describe the construct “criminal attitudes” appears to be “the constellation of criminally oriented attitudes, values, beliefs, and rationalizations” (Simourd, 1997). It is also sensible to classify criminal attitudes into three main categories: rejection of convention, techniques of neutralization, and identification with criminal others (Andrews & Bonta, 1995).

A second reason why the criminal attitude construct has been largely overlooked is the lack of suitable assessment instruments. There are only a few appropriate and valid instruments capable of measuring criminal attitudes in a reasonable and useful manner (Banse, Kopppele-Gossel, Kistemaker, Werner, & Schmidt, 2013). All of them come from North America, and although they are known worldwide, none of them has been translated nor validated into Spanish yet. Among the few valid instruments that measure criminal attitudes there is the Pride in Delinquency (PDI) scale, developed by Shields and Whitehall (1991), the Measures of Criminal Attitudes and Associates scale (MCAA; Mills, Kroner, & Hemmati, 2004), the Psychological Inventory of Criminal Thinking Styles (PICTS; Walters, 2012), and the modified version of the Criminal Sentiment Scale (CSS-M; Shield & Simourd, 1991; Simourd & Olver, 2002). Only the CSS-M takes into account just the content and the three categories of criminal attitudes, but not the process.

The CSS-Modified improved some flaws of the original Criminal Sentiment Scale (CSS; Gendreau, Grant, Leipciiger, & Collins, 1979) in the following ways: (a) some items were modified in order to be more understandable, (b) the score of the first subscale was swept from a 5-point Likert scale to a 3-option response, and (c) the structure analysis appeared to be different. Kroner and Mills (1998), with a sample of 331 male offenders, used a two-factor structure of the original CSS, specifically, labelled Contempt for Criminal Justice Personnel (accounting for 17.4% with an eigenvalue of 8.64) and Disrespect for Conventional Law (16.2%, eigenvalue of 2.43). Simourd and Olver (2002) came up with a four-factor model in their modified version (CSS-M) instead. The EFA and CFA were conducted separating the items by subscales, so that two of the factors (General Criminal Sentiments and Adversarial Toward the Law) come from the first subscale, and two others (Criminal Subcultural beliefs and Criminal Self-Concept) come from the remaining two subscales. Both scales have been widely used in many different and relevant studies (Andrews & Bonta, 1995; Skilling & Sorge, 2014; Wolff, Morgan, & Shi, 2013).

The present study had the main goal of testing the validity and reliability of the CSS-M and investigating its factorial structure. By doing this, the study expects eventually to enable the CSS-M to be used to assess criminal attitudes across different Spanish-speaking countries.

Method

Participants

The sample consisted of 153 male inmates from one of the sixteen Catalan prisons (Spain), the medium-security institution Brian’s I. This penitentiary center is one of the largest, housing approximately 1,400 inmates, both men and women, and is run by the Catalan Prison Service. These inmates were selected according to the residential unit they lived in and the type of offence they had committed. This ensured that no crime was overrepresented. The sample of offenders was taken from different regular modules and units. Each participant was under grade 2 regime and free from any punishments at the time. To ensure the sample was valid, it was important that all inmates had a good reading ability – special care was taken to guarantee this. Mean age was 37.3 years (SD = 10), ranging from 21 to 81. The Spaniards represented 73.9% of the sample, the other 26.1% being foreigners. Since previous studies have pointed out whether the crimes committed were violent or not (Andrews & Bonta, 2010), we focused on this variable, considering a crime as violent only if it had been committed in a physical manner; 38.6% of the inmates had committed a non-violent crime and 61.4% had perpetrated violent offences. The length of the sentences ranged from 1 to 23 years of incarceration, with a mean term of 7.2 years (SD = 5.7).

In this study we defined a recidivist as an inmate who has been released from prison after serving his sentence and then re-enters prison because he or she has committed a new crime afterwards. Therefore, this variable ignores the number of crimes perpetrated (a person can commit a large number of crimes but enter prison for the first time), focusing only on the offence or offences committed between release and re-entry to prison. That said, 47.1% of inmates of the sample entered prison for the first time to serve a mandatory punishment of imprisonment, and 52.9% had relapsed on the aforementioned terms, returning to prison for the second time or more: 47.7% were serving only one sentence and 52.3% were serving two or more terms. This disregards any prior offences committed before the current entry date. We did not take into consideration the release day, nor the proportion of the overall sentence already served, in order to better randomize the sample.
Instrument

Spanish version of the Criminal Sentiment Scale Modified (CSS-M). The Spanish version of the CSS-M consists of the same number of items, 41, as the original English scale. Each of the subscales represent one of the three general categories of criminal attitudes: the subscale Attitudes toward the Law, Court and Police (LCP) comprises the first 25 items, e.g., “The law doesn’t help people (L)”, “You cannot get justice in court (C)”, or “Life would be better with fewer cops” (P). This subscale refers to the category Rejection of Convention, meaning that people who refuse social norms and law-enforcing public institutions are more prone to break the law. The second subscale is Tolerance for Law Violations (TLV), e.g., “A hungry man has the right to steal”, with 10 items related to the category of neutralization. This kind of attitude allows people to let themselves do something socially wrong, making it easier for them to break the law. The third subscale is the Identification with Criminal Others (ICO), with 6 items, e.g., “No one who breaks the law can be my friend”. This category is closely related to the third risk factor of the Big Four, criminal associates, but while the former refers to the inner thoughts to identify oneself as a criminal, the latter implies that one explicitly spends time or not with such criminals. The score of the CSS-M ranges from 0, meaning absence of pro-criminal attitudes, to 82. Thus, higher scores reflect higher levels of criminal attitudes by the respondent.

The responses of the original CSS-M (agree, disagree or undecided) were changed to yes, no, or question mark (?) to avoid misunderstandings among inmate respondents. The acceptance of a prosocial statement or the rejection of a criminal one yields 0 points, whereas an endorsement of a criminal statement (items of reverse score) or the rejection of a prosocial one yields 2 points. An undecided response always yields one point.

Procedure

In order to translate and adapt the CSS-M into Spanish, the most reliable and known procedure, the backward-translation method (Hambleton, 2005) was used. To achieve this, firstly a bilingual person translated the original scales into Spanish, focusing more on the idiomatic meaning than on word-for-word translation. Secondly, another professional who was unfamiliar with the scale made a backward-translation of the reviewed version into English again. Then, to verify that the meaning of the scales was preserved, both English scales versions were compared and reviewed to make cultural and vocabulary adaptations. Afterwards, a group of prison professionals reviewed a defined Spanish version of the CSS-M. This translation technique avoided any flaws or losses in translation compared to a direct one. The CSS-M Spanish version was administered by a team of both psychologists and educational workers who had been adequately trained to administer it. They explained each of the steps of the confidentiality agreement and guidelines scale. Because of the vulnerability of the inmates as a sensitive group, it was important to highlight that answering the CSS-M SV was entirely voluntary. The confidentiality agreement was based on three key aspects: (a) that the information provided by the inmate would not have any impact on their prison life in any case, so that they answer exactly what they think; (b) that the information they revealed through the questionnaire was only under their consent; and (c) that the inmates’ name would not be placed in any public or private document, but managed by a five-digit random code. Inmates were told about the detailed instructions at the very beginning of the questionnaire, remarking that it was not a test with good or wrong responses, that they should try to answer it honestly, and that the material was just for experimental and research purposes. Offenders answered the CSS-M Spanish version voluntarily without any remuneration. Only four inmates refused to do it.

Data analysis

Data analysis was carried out using the programs SPSS version 15.0 (SPSS Inc., 2006) and Mplus (Muthén & Muthén, 2010). They started with an item analysis, which included indices of reliability. It was followed by the analysis of the factor structure conducting an explorative factor analysis (EFA) by an oblique rotation technique and a confirmatory factor analysis (CFA). Finally, several mean comparison analyses, by ANOVA procedure, were also carried out to establish significant group differences.

Results

Item Analysis

The 41 items of the CSS-M scale were analysed. In general, most of the items had a mean rating of around 1, indicating that they did not have a skewed distribution. Items 1 and 6 were exceptions, as both were not normally distributed, with means of 0.15 and 0.1 respectively. Tests of normality were conducted, regarding the values of skewness and kurtosis of the variables. Despite the problems with the two items, the reliability of the total scale had not been weakened. Table 1 shows the means, standard deviations, Cronbach’s alpha, maximum, minimum, kurtosis, and symmetry for each subscale.

Reliability Analysis

Cronbach’s alpha coefficient was used to establish the internal consistency of the scale. The alpha values of the subscales ranged between .61 and .86. The reason the ICO subscale had the lowest coefficient was because it only had 6 items. Even so, it was slightly better than that of the original’s (α = .51). The overall alpha coefficient of the Spanish version (α = .89) was very similar to that of the English scale (α = .91) by Simourd and Olver (2002). Correlations between CSS-M subscales shown in Table 2 were all statistically significant.

Construct Validity

An analysis of the structure of the scale was carried out through an Exploratory Factor Analysis (EFA) with an Oblique rotation technique, completed by the default Geomin rotation of the Mplus statistic package. Prior to this, we found that the Kaiser-Meyer-Olkin (KMO) measure of sampling adequacy was .73 and Bartlett’s test of sphericity achieved was statistically significant ($\chi^2 = 3053.34, p < .001$), showing the appropriateness of performing the EFA. This took into account all the 41 items, eigenvalues

Table 1

<table>
<thead>
<tr>
<th>CSS-M subscales</th>
<th>M</th>
<th>SD</th>
<th>α</th>
<th>Max.</th>
<th>Min.</th>
<th>Kurtosis</th>
<th>Symmetry</th>
</tr>
</thead>
<tbody>
<tr>
<td>L</td>
<td>8.08</td>
<td>4.27</td>
<td>.71</td>
<td>18</td>
<td>0</td>
<td>-.625</td>
<td>.058</td>
</tr>
<tr>
<td>C</td>
<td>9.82</td>
<td>3.62</td>
<td>.73</td>
<td>16</td>
<td>0</td>
<td>-.194</td>
<td>.556</td>
</tr>
<tr>
<td>P</td>
<td>7.37</td>
<td>3.55</td>
<td>.75</td>
<td>14</td>
<td>0</td>
<td>-.737</td>
<td>-.085</td>
</tr>
<tr>
<td>LCP</td>
<td>25.27</td>
<td>9.70</td>
<td>.86</td>
<td>47</td>
<td>1</td>
<td>-.302</td>
<td>-.282</td>
</tr>
<tr>
<td>TLV</td>
<td>8.12</td>
<td>3.96</td>
<td>.62</td>
<td>20</td>
<td>0</td>
<td>-.191</td>
<td>.346</td>
</tr>
<tr>
<td>ICO</td>
<td>3.78</td>
<td>2.71</td>
<td>.61</td>
<td>12</td>
<td>0</td>
<td>-.441</td>
<td>.899</td>
</tr>
<tr>
<td>CSS-M</td>
<td>37.18</td>
<td>14.09</td>
<td>.89</td>
<td>72</td>
<td>5</td>
<td>-.188</td>
<td>-.104</td>
</tr>
</tbody>
</table>

Note. L = law; C = police; LCP = law, court, police; TLV = tolerance for law violations; ICO = identification with criminal others; CSS-M = Criminal Sentiment Scale-Modified total score.
greater than 1, and loadings above .30. As shown in Table 3, the most suitable factor solution was a two-factor structure, accounting for 28.4% of the overall. Factor 1 was labelled Sentiments toward the establishment, comprising the majority of the items of the LCP subscale, while Factor 2, labelled Criminality self-beliefs, contained most items of both the TLV and ICO scales.

To test the hypothesis that the CSS-M had a two-factor structure, a confirmatory factor analysis (CFA) was performed. The results showed that this model fitted reasonably well to data (Hu & Bentler, 1999), $\chi^2/df = 1.89$, RMSEA = .07 [.06, .08], SRMR = .08. Additionally, cross-validation (splitting the sample into two groups, odd and even participants) exhibited similar results, supporting the stability of the model fit and the generalization to other samples of the same population (Arce, Velasco, Novo, & Fariña, 2014).

A one-way analysis of variance (ANOVA) was completed separately to analyse possible differences of criminal attitudes within some groups: nationality, age, type of offence, recidivism, number of crimes serving, and sentence length (see Table 4). Inmates who committed violent crimes showed higher level of criminal attitudes than those who committed offences without violence ($p = .05$), while people who committed a crime and entered prison for the first time had lower levels of criminal attitudes than those offenders who relapsed, that is, returned to prison for committing another crime ($p = .034$).

However, whether the inmate was currently serving a sentence for committing one or more crimes did result in higher or lower criminal attitudes scores. Hence, the number of crimes they were serving sentence for was an irrelevant variable in determining the inmates’ criminal attitudes ($p = .306$). Likewise, to serve a term of ten or more years was also irrelevant ($p = .087$). Foreigners and nationals did not have significant differences in criminal attitudes either ($p = .909$).

Discussion

The aim of this study was to validate and analyse the psychometric properties of the Spanish version of the Criminal Sentiment Scale Modified, this being the first time that this scale had been adapted into Spanish. The results of our study demonstrate acceptable reliability and validity with the assessment of criminal attitudes within the sample of inmates from the Catalan Prison Service. We found a two-factor solution as that performed by Kroner and Mills (1998) in the original CSS scale, instead of a four-factor solution of the most recent study of CSS-Modified by Simourd and Olver (2002). According to these authors, their study provided more comprehensive factor analytical techniques, separating each scale to complete the analysis. Even so, the fourfold structure was similar in item content to those factors previously derived by Kroner and Mills (1998). Simourd claimed that the separation of each scale beforehand improved the psychometric properties, while completing the analysis with all the items simultaneously was thought to be crucial. However, like the factor analyses performed by both Kroner and Mills (1998) and Simourd and Olver (2002), there were some items that simply did not load either of the factors, or loaded too much both of them. The CFA completed by Simourd and Olver (after the completion of an EFA), did not comprise all the items because of this problem with the
Table 4

<table>
<thead>
<tr>
<th>Nationality</th>
<th>N</th>
<th>M</th>
<th>SD</th>
<th>F</th>
</tr>
</thead>
<tbody>
<tr>
<td>Foreigner</td>
<td>40</td>
<td>44.78</td>
<td>14.81</td>
<td></td>
</tr>
<tr>
<td>Native</td>
<td>113</td>
<td>44.42</td>
<td>17.30</td>
<td>0.01</td>
</tr>
<tr>
<td>Type of offence</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Nonviolent</td>
<td>59</td>
<td>41.20</td>
<td>16.44</td>
<td></td>
</tr>
<tr>
<td>Violent</td>
<td>94</td>
<td>46.60</td>
<td>16.51</td>
<td>3.88*</td>
</tr>
<tr>
<td>Recidivism</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>First Entry</td>
<td>72</td>
<td>41.50</td>
<td>15.81</td>
<td></td>
</tr>
<tr>
<td>Prison Recidivist</td>
<td>81</td>
<td>47.20</td>
<td>16.99</td>
<td>4.57*</td>
</tr>
<tr>
<td>Crimes serving</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>one offence</td>
<td>73</td>
<td>43.07</td>
<td>16.49</td>
<td></td>
</tr>
<tr>
<td>2 or more offences</td>
<td>80</td>
<td>45.84</td>
<td>16.77</td>
<td>1.06</td>
</tr>
<tr>
<td>Length of sentence</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Up to 10 years</td>
<td>121</td>
<td>44.63</td>
<td>16.44</td>
<td></td>
</tr>
<tr>
<td>More than 10 years</td>
<td>32</td>
<td>44.09</td>
<td>17.63</td>
<td>0.03</td>
</tr>
</tbody>
</table>

* p < 0.05.

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