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Initial Validation of the Spanish Childhood Trauma Questionnaire-Short Form: Factor Structure, Reliability and Association With Parenting

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Abstract

The present study examines the internal consistency and factor structure of the Spanish version of the Childhood Trauma Questionnaire-Short Form (CTQ-SF) and the association between the CTQ-SF subscales and parenting style. Cronbach's α and confirmatory factor analyses (CFA) were performed in a female clinical sample ($n = 185$). Kendall's ι correlations were calculated between the maltreatment and parenting scales in a subsample of 109 patients. The Spanish CTQ-SF showed adequate psychometric properties and a good fit of the 5-factor structure. The neglect and abuse scales

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were negatively associated with parental care and positively associated with overprotection scales. The results of this study provide initial support for the reliability and validity of the Spanish CTQ-SF.

Keywords

child maltreatment, child abuse, child neglect, bonding, parenting

The relevance and growing interest in the study of childhood maltreatment in clinical and nonclinical samples is a response to both the high frequency of these experiences and their pervasive effects on psychological adjustment (Briere & Elliott, 2003; Cohen, Brown, & Smaile, 2001; Widom, DuMont, & Czaja, 2007). Spanish studies estimate the prevalence of childhood maltreatment in Spain between 0.44 and 18 per thousand, based on the number of cases reported to or detected by the authorities (Centro Reina Sofía, 2005; De Paúl, Arruabarrena, Torres, & Muñoz, 1995; Inglès, Farràs, Rafel, & Sendra, 2000; Jiménez, Moreno, Oliva, Palacios, & Saldaña, 1995; Saldaña, Jiménez, & Oliva, 1995; Sanmartín, 2002). However, studies focused on the retrospective assessment of childhood sexual abuse estimate the prevalence of sexual abuse between 12.5% and 19% (Cortes, Duarte, & Canton-Cortes, 2011; Lopez, Hernandez, & Carpintero, 1995; Pereda & Forns, 2007). The assessment of childhood adverse experiences has been a major topic of research and remains under discussion. A common strategy in epidemiological and longitudinal studies is the gathering data of official records; however, most cases of maltreatment are not reported. A review on child abuse disclosure reported that between 55% and 69% of adults never told anyone about sexual abuse during childhood (London, Bruck, Wright, & Ceci, 2008). Retrospective self-assessment instruments for adolescents and adults solve the limitation of child nondisclosure; however, this method has limitations such as recall biases and the lack of temporality criteria (Ball & Links, 2009).

Gerdner and Allgulander (2009) state that memories of maltreatment must be assessed with reliable and valid instruments that meet the following requirements: easy, ethical and nonintrusive administration; conceptual validity; assessment of relevant types of maltreatment; and sensibility to maltreatment severity. The Childhood Trauma Questionnaire-Short Form (CTQ-SF; Bernstein & Fink, 1998; Bernstein et al., 2003) is the gold standard instrument for the retrospective self-assessment of childhood maltreatment and it meets most of these requirements. First, the CTQ-SF assesses five widely accepted types of maltreatment: emotional abuse, physical abuse, sexual

abuse, emotional neglect, and physical neglect (Bernstein & Fink, 1998; Sedlak et al., 2010). Second, the simple and brief administration and its relative noninvasiveness make it a good screening instrument for clinical and research purposes. Third, each item is scored using Likert-type responses to create dimensional scales and three severity cutoff points for each scale (Bernstein & Fink, 1998). Last, the CTQ-SF has demonstrated adequate psychometric properties, including a good fit of the five-factor structure across clinical and nonreferred samples, satisfactory specificity, good sensitivity and good convergent and discriminant validity (Bernstein & Fink, 1998; Bernstein et al., 2003). Moreover, the CTQ-SF's validity has been supported by independent corroborative data such as childhood maltreatment interviews as well as information from referring clinicians, agencies, and the reports of other informants (Bernstein & Fink, 1998; Bernstein et al., 2003; Lobbestael, Arntz, Harkema-Schouten, & Bernstein, 2009).

Some studies have examined the relationships between memories of childhood maltreatment and adults' memories of their parents' parenting style. Because parenting and maltreatment are similar but not identical constructs, intercorrelations between them are a good measure of the CTQ-SF's discriminant and convergent validity. A standard instrument often used to assess retrospective parenting style is the Parental Bonding Instrument (PBI; Parker, Tupling, & Brown, 1979), which measures perceived maternal and paternal care and overprotection. Parental care is considered, in this instrument, as a bipolar dimension, ranging from parental warmth, affection, involvement and empathy to parental coldness, rejection, detachment, indifference, and aloofness. The overprotection dimension, in turn, ranges from psychological control, infringement, imposition, intrusiveness and infantilization to the detached promotion of independence, autonomy and self-sufficiency. Finzi-Dottan and Karu (2006) examined the relationships between the emotional abuse CTQ-SF scale and the care and overprotection PBI scales in an undergraduate sample. Emotional abuse was positively related to paternal and maternal overprotection, whereas paternal and maternal care were negatively correlated with emotional abuse. The CTQ-SF total score has also been related to the PBI scales in an adult sample with and without child maltreatment experiences; the relationship reported was negative with care scales and positive with overprotection scales (Rikhye et al., 2008). Seganfredo et al. (2009) examined the relationship between the PBI and the CTQ-SF scales in a sample of panic disorder and control subjects. The results showed that the risk of maltreatment, especially emotional neglect and emotional abuse, decreased with higher scores in maternal and paternal care, whereas the maltreatment risk increased with higher overprotectiveness and authoritarianism.

Only the sexual abuse risk was neither increased nor decreased for the effect of the PBI scales. In a depression and anxiety outpatient sample, sexual abuse wasn't related to any PBI scale (McGinn, Cukor, & Sanderson, 2005). In this study, parental and maternal care scales were negatively related to emotional abuse and neglect. The overprotection scales were not significatively related to the CTQ-SF scales, except maternal overprotection which was positively related to emotional and physical abuse (McGinn et al., 2005). In summary, the results of the studies that examined the relationships between the CTQ-SF and the PBI, showed that the CTQ-SF scales were negatively associated with parental care and positively associated with parental overprotection. The association was especially high between emotional neglect and parental care, whereas sexual abuse was not associated with any PBI scale.

Since its initial development (Bernstein et al., 1994), the CTQ-SF has widely shown its validity, reliability and stability in the assessment of maltreatment memories. The CTQ-SF has also been translated in more than 10 languages and adapted to different countries, maintaining its good psychometric properties (Fosse & Holen, 2002, 2007; Gerdner & Allgulander, 2009; Grassi-Oliveira, Stein, & Pezzi, 2006; Kim, Park, Yang, & Oh, 2011; Martsolf, 2004; Paquette, Laporte, Bigras, & Zoccolillo, 2004; Sarchiapone, Carli, Cuomo, & Roy, 2007; Thombs, Bernstein, Lobbestael, & Arntz, 2009; Wingenfeld et al., 2010; Zhang, Chow, Wang, Dai, & Xiao, 2011). Because of the CTQ-SF's strengths and its high performance in intercultural studies, we consider it necessary to translate, adapt, and provide initial reliability and validity data for the Spanish CTQ-SF. The primary aim of this study is to examine the internal consistency and the factor structure of the Spanish CTQ-SF. The secondary aim is to provide evidence of discriminant and convergent validity between the CTQ-SF Spanish subscales and memories of parenting style. From these general aims we state four hypotheses: (a) the Spanish CTQ-SF shows adequate internal consistency reliability; (b) the factor structure of the Spanish CTQ-SF fits well to the five-factor model of the English version of the CTQ-SF; (c) caring scales are negatively correlated with CTQ-SF scales, especially with emotional neglect; and (d) overprotection scales are positively correlated with the CTQ-SF scales, especially with emotional abuse.

Method

Sample

Subjects included in this study were 185 inpatient and outpatient females between 18 and 65 years of age from various mental health centers of the

Hospital Universitari Psiquiàtric Insitut Pere Mata in Reus, Spain. Patients with a diagnosis of one or more of the following ICD-10 categories were excluded: mental retardation, organic mental disorders, schizophrenia, schizotypal and delusional disorders, manic episode, and bipolar affective disorder.

The mean age of the whole sample was 41.64 years (SD = 11.83). Of the sample, 48.1% received treatment on an outpatient basis during the assessment period, and the remaining patients received inpatient treatment.

Patients answered the Spanish CTQ-SF as part of a battery of tests from two different research studies (Hernandez, Arntz, Gaviria, Labad, & Gutierrez-Zotes, 2012). Both studies were approved by the institutional review board at the Hospital Universitari Psiquiàtric Insitut Pere Mata in Reus and the ethical committee for clinical research at the Hospital Universitari Sant Joan in Reus. All of the patients signed an informed consent document after receiving a verbal and written explanation of the study, the conditions, and the voluntary nature of their participation.

Measures

Childhood Trauma Questionnaire–Short Form (CTQ-SF; Bernstein & Fink, 1998). The CTQ-SF is a 28-item self-report instrument for adults and adolescents that assesses retrospective child abuse and neglect. The CTQ-SF was developed from an initial 70-item version developed by Bernstein et al. (1994). The length of the scale was reduced from 70 to 28 items based on exploratory and confirmatory factor analyses. The CTQ-SF assesses the following five types of maltreatment: emotional abuse, physical abuse, sexual abuse, emotional neglect, and physical neglect. Each scale is represented with five items that are scored on a 5-point Likert-type scale ranging from *never true to very often true.* Three additional items compose the minimization scale for detecting socially desirable responses or false-negative trauma reports. The internal consistency coefficients of the English version ranged from 0.84 to 0.89 for emotional abuse, 0.81 to 0.86 for physical abuse, 0.92 to 0.95 for sexual abuse, 0.85 to 0.91 for emotional neglect, and 0.61 to 0.78 for physical neglect (Bernstein et al., 2003). The five-factor structure of the CTQ-SF was maintained across clinical and nonreferred samples. The results of confirmatory factor analyses indicated a good and acceptable fit of the five-factor model (Bernstein et al., 2003). The CTQ-SF was translated into Spanish and back-translated by bilingual Spanish and English native speakers, respectively. A panel of PhD- and masters-level psychologists and psychiatrists

checked the translation and backtranslation until no major discrepancies were noticed and agreed on the final Spanish version.

Parental Bonding Instrument (PBI; Parker et al., 1979). The perceived parental rearing style until 16 years of age was assessed with the Spanish PBI. This self-report questionnaire has 25 items that are scored on a 4-point Likert-type scale ranging from *very unlike* to *very like*. Two subscales, care and overprotection, are computed for each parental figure. The Spanish PBI showed good internal consistency for the four subscales, with Cronbach's α ranging from 0.82 to 0.88 (Ballús, 1996).

Structured clinical interview for Diagnostic and Statistical Manual of Mental Disorders (4th ed.; DSM-IV) Axis II personality disorders (SCID-II; First, Gibbon, Spitzer, Williams, & Benjamin, 1997). DSM-IV personality disorders were assessed with the SCID-II Spanish version (First, Gibbon, Spitzer, Williams, & Benjamin, 1999). As suggested by Pagan, Otlmanns, Whitmore, and Turkheimer (2005), patients with more than 10 PD criteria and without any other form of PD received a diagnosis of PD not otherwise specified.

Structured clinical interview for DSM-IV Axis I (First, Gibbon, Spitzer, & Williams, 1997). DSM-IV dysthymic disorder was assessed with the dysthymic section of the SCID-I Spanish version (First, Gibbon, Spitzer, & Williams, 1999).

Procedure

The CTQ-SF was administered to 44 patients in a research study about the treatment of dysthymic disorder; all of the patients met SCID-I diagnostic criteria for dysthymic disorder. In addition, the CTQ-SF was administered to 141 patients as part of a validation study of the CTQ-SF and its relationship with BPD. In this second study, a subsample of 109 patients completed a battery of interviews and questionnaires including the SCID-II and the PBI. In this subsample, 75 patients met SCID-II diagnostic criteria for one or more personality disorder (borderline, $n = 32$; paranoid, $n = 5$; schizotypal, $n = 2$; narcissistic, $n = 1$; histrionic, $n = 10$; avoidant, $n = 9$; dependent, $n = 2$; obsessive-compulsive, $n = 9$; and not otherwise specified, $n = 17$). Thirty-four patients did not meet SCID-II criteria for any PD; the ICD-10 primary diagnoses for these patients were major depressive disorder or dysthymia, $n = 9$; anxiety disorder, $n = 5$; substance dependence disorder, $n = 5$; adjustment disorder, $n = 12$; eating disorder, $n = 2$; and hypochondriasis, $n = 1$.

Data Analyses

Distribution analyses showed that the data were not normally distributed, and non-parametric analyses were selected. The median and the interquartile

range were calculated to describe the CTQ-SF scales for the entire sample and the inpatient and outpatient subsamples. Differences between groups were examined with Mann-Whitney *U*-tests, and effect sizes were calculated with the equation $r = Z/\sqrt{N}$.

Cronbach's α coefficients were calculated for the entire sample to examine the internal consistency of the CTQ-SF. Means and standard deviations were also calculated to describe the CTQ-SF items. Correlations between the CTQ-SF scales were examined with Kendall's ι.

Confirmatory factor analysis (CFA) was performed with EQS 6 software (Bentler, 2006) to test the structural validity of the CTQ-SF five-factor model proposed by Bernstein et al. (2003) in the entire sample. The maximum likelihood method with Satorra-Bentler robust corrections was used because of the multivariate kurtosis of the data (Satorra & Bentler, 1994, 2001). Factors were allowed to covary because previous research indicated that the CTQ-SF scales were intercorrelated (Bernstein et al., 1994; Bernstein, Ahluvalia, Pogge, & Handelsman, 1997). The model fit was assessed with the Satorra-Bentler Scaled Chi-square test (S-B χ^2); significant values of S-B χ^2 and coefficients of S-B χ^2/df lower than 2 are indicative of a good fit (Newcomb, 1994). The relative fit was assessed by two indices. First, the fit was assessed by Comparative Fit Index (CFI), which generally varies between 0 and 1 with values of 0.90 or greater considered to represent a good fit (Hu & Bentler, 1999). Second, the root mean-square error of approximation (RMSEA) was used to estimate the fit, with values of 0.05 or less indicating a well-fitting model (Steiger, 2000).

Kendall's ι correlation between the CTQ-SF and PBI scales was calculated to examine the associations between the instruments.

Results

The medians and interquartile ranges of the CTQ-SF scales are reported in Table 1. Scores in four of the five CTQ-SF scales were higher in the inpatient group than in the outpatient group, but only differences in physical and sexual abuse were statistically significant. The means, standard deviations, and Cronbach's α coefficients of CTQ-SF scales and items are reported in Table 2. Cronbach's α coefficients ranged from 0.66 for emotional neglect to 0.94 for sexual abuse. The correlations between the CTQ-SF scales ranged from 0.29 to 0.50 (Table 3).

The CFA results showed a good model fit: S-B χ^2 (265) = 380.51, $p < .001$; S-B $\chi^2/df = 1.43$; CFI = 0.94; RMSEA = 0.04. Therefore, modifications of the model were not necessary. Item loadings are shown in Figure 1. All items had factor loadings higher or equal to 0.40 with the exception of item 1 (0.36).

Table 1. CTQ-SF Scales: Median, Interquartile Range and Differences Between Groups

	Total (n = 185) *Mdn* (I-R)	Inpatients (n = 96) *Mdn* (I-R)	Outpatients (n = 89) *Mdn* (I-R)	Mann-Whitney *U* test	*Z*	*R*
Emotional abuse	13 (8-18)	14 (9-18)	11 (7-17)	3,581	−1.90	−0.13
Physical abuse	6 (5-11)	7 (5-11)	5 (5-9)	3,391*	−2.54	−0.18
Sexual abuse	6 (5-12)	8 (5-15)	5 (5-8)	3,349**	−2.7	−0.19
Emotional neglect	12 (8-17)	13 (8-17)	12 (8-16)	3,923	−0.96	−0.07
Physical neglect	6 (5-9)	6 (5-10)	6 (5-9)	4,076	−0.55	−0.04

Note. I-R = interquartile range; *R* = effect size estimated for Mann-Whitney *U* Test.
*p< .05. **p < .01.

Distribution of covariance standardized residuals was symmetric and close to zero. Of the standardized residuals, 89.54% were between −0.1 and 0.1, average 0.05. Only two covariances had standardized residuals higher than 0.20: covariance between item 6 and 1 (0.27), and covariance between item 17 and 9 (0.27). Latent factor intercorrelations ranged from 0.37 to 0.84 (Table 3).

The results of Kendall's ι correlations are reported in Table 4. Inverse relationships between maternal and paternal care and all of the maltreatment scales were significant. Correlations between maternal overprotection and emotional abuse and neglect were also significant. Paternal overprotection was significantly related with all of the CTQ-SF scales except sexual abuse.

Discussion

The results of the present study support the reliability and validity of the Spanish CTQ-SF. The primary aim of this study was to examine the internal consistency and the factor structure of the Spanish CTQ-SF. The Spanish adaptation of the CTQ-SF showed adequate psychometric properties and a good fit of the five-factor structure in a clinical female sample.

The means of the Spanish CTQ-SF scales were similar to those of female clinical samples in previous studies (Bernstein & Fink, 1998; Gerdner & Allgulander, 2009). Internal consistency reliability coefficients were good to excellent for four of the five CTQ-SF scales. As in previous studies, the physical neglect scale showed a Cronbach's α coefficient that was lower than 0.70 (Bernstein & Fink, 1998; Bernstein et al., 2003; Gerdner & Allgulander, 2009; Paquette et al., 2004; Thombs et al., 2009; Wingenfeld et al., 2010).

Table 2. Means, Standard Deviations and Reliability for Scales and Items of the Spanish CTQ-SF (n = 185)

	Mean (*SD*)	α	α[a]
Emotional abuse	13.10 (6.09)	0.87	
Item 3	2.58 (1.43)		0.85
Item 8	2.29 (1.48)		0.85
Item 14	2.83 (1.50)		0.83
Item 18	2.36 (1.45)		0.85
Item 25	3.03 (1.58)		0.84
Physical abuse	8.44 (4.89)	0.88	
Item 9	1.30 (0.82)		0.88
Item 11	1.93 (1.28)		0.83
Item 12	1.82 (1.26)		0.84
Item 15	2.03 (1.42)		0.85
Item 17	1.34 (1.00)		0.87
Sexual abuse	9.08 (5.76)	0.94	
Item 20	2.03 (1.34)		0.93
Item 21	1.55 (1.13)		0.94
Item 23	1.73 (1.21)		0.93
Item 24	1.89 (1.27)		0.92
Item 27	1.86 (1.36)		0.93
Emotional neglect	12.47 (5.46)	0.83	
Item 5 (R)	2.67 (1.50)		0.83
Item 7 (R)	2.22 (1.27)		0.78
Item 13 (R)	2.27 (1.32)		0.80
Item 19 (R)	2.60 (1.35)		0.78
Item 28 (R)	2.71 (1.57)		0.78
Physical neglect	7.50 (3.28)	0.66	
Item 1	1.47 (1.01)		0.62
Item 2 (R)	1.63 (1.03)		0.62
Item 4	1.55 (1.12)		0.66
Item 6	1.29 (0.81)		0.57
Item 26 (R)	1.55 (1.00)		0.60

Note. (R) = reverse item.
[a]Cronbach's α if item is deleted.

Table 3. Correlations Between the Spanish CTQ-SF Scales (n = 185)[a]

	EA	PA	SA	EN	PN
EA	—	0.43	0.37	0.49	0.40
PA	0.64	—	0.35	0.30	0.33
SA	0.50	0.45	—	0.29	0.30
EN	0.76	0.48	0.37	—	0.50
PN	0.60	0.46	0.38	0.84	—

Note. EA = emotional abuse; PA = physical abuse; SA = sexual abuse; EN = emotional neglect.
[a]Kendall's τ correlations are shown above the diagonal and CFA latent factor correlations are shown below the diagonal.

The CFA results support the structure of five factors proposed by Bernstein et al. (2003). The initial model provided good fit indices without the need of additional new paths or covariances between errors. As in the CTQ-SF English version, the physical neglect scale showed the lowest factor loadings in the CFA (Bernstein et al., 2003). This result and the low internal consistency of this scale indicate that this factor is the least homogeneous. Gerdner and Allgulander (2009) suggest that the CTQ-SF construct of physical neglect could be composed of two related dimensions: lack of care (items 2 and 26) and lack of supervision (items 1, 4, and 6). This hypothesis may explain the high correlation between emotional and physical neglect, as the dimension of lack of care has physical and emotional connotations, and it is similar to emotional neglect. Bernstein and Fink (1998) defined emotional neglect as a failure to provide psychological and emotional needs such as love, encouragement, belonging, and support.

The correlations between the Spanish CTQ-SF latent factors were similar to those of the original version, as Bernstein et al. (2003) reported that the correlation was the highest between emotional and physical neglect. The correlations between the latent factors indicated however that when the measurement error was accounted for, the emotional and physical neglect scales are related but do not belong to the same factor.

The secondary aim was to provide evidence of discriminant and convergent validity between the CTQ-SF Spanish subscales and parenting style. We hypothesized that the CTQ-SF would be positively correlated with the PBI overprotection scales and negatively correlated with PBI care scales. The results of the present study support these hypotheses. The negative pole of the care dimension (parental coldness, rejection, and detachment) was related to all abuse and neglect scales, especially emotional neglect, which is theoretically the closest construct. The *APSAC Handbook on Child Maltreatment*

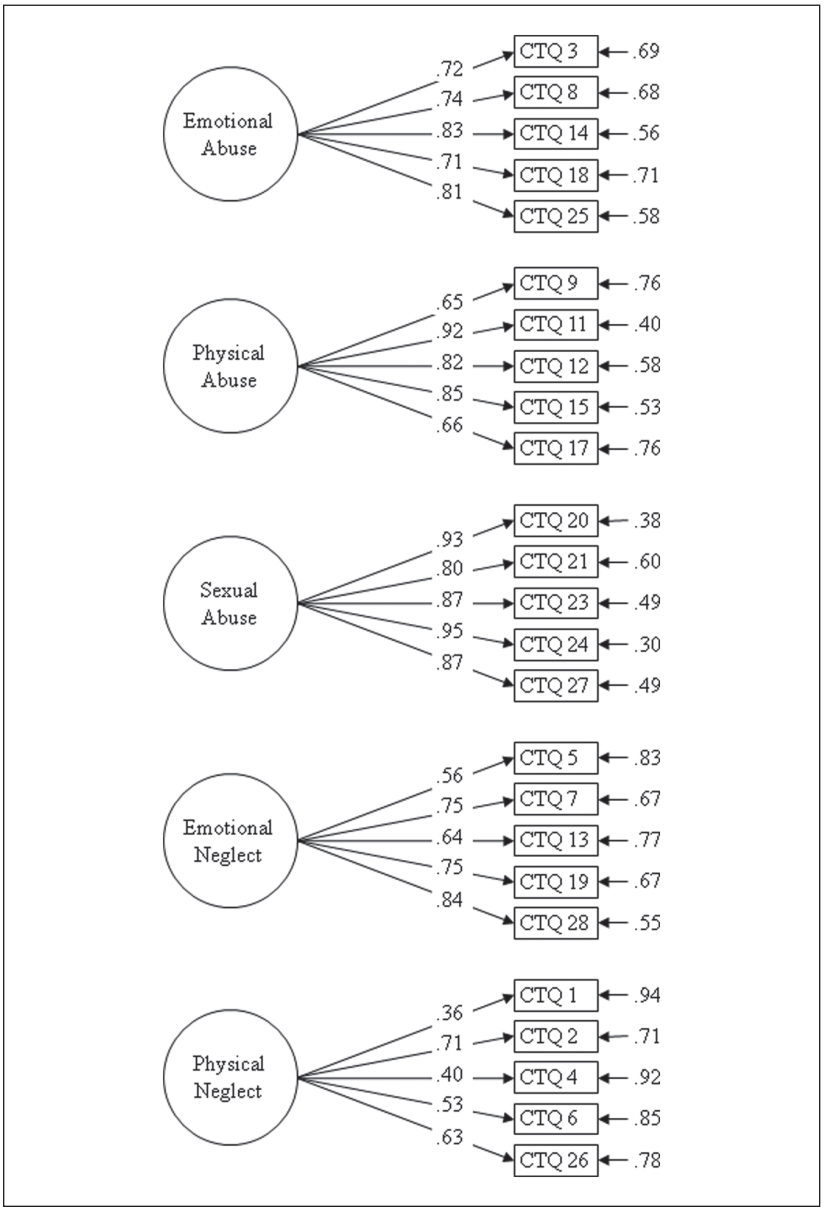

Figure 1. Standardized loadings of the Spanish CTQ-SF items in the confirmatory factor analysis. Factor loadings of CTQ-SF items are shown on the left side of each item. The loadings of the residuals are shown on the right side.

Table 4. Kendall's τ Correlations Between the Spanish CTQ-SF and the PBI Scales (n = 109)

	EA	PA	SA	EN	PN
Maternal care	−0.37***	−0.23**	−0.32***	−0.52***	−0.39***
Paternal care	−0.45***	−0.33***	−0.25***	–0.50***	−0.44***
Maternal overprotection	0.22***	0.09	0.12	0.29***	0.13
Paternal overprotection	0.31***	0.16*	0.10	0.18**	0.22**

Note. EA = emotional abuse; PA = physical abuse; SA = sexual abuse; EN = emotional neglect. *p < .05. **p < .01. ***p< .001.

defines the emotional neglect as a form of psychological maltreatment, that is, a repeated pattern of caregiver behavior or extreme incident(s) that convey to children that they are worthless, flawed, unloved, unwanted, endangered, or only of value in meeting another's needs (Hart et al., 2011).

The overprotection scales, which assess psychological control, infringement, and imposition, were related to the emotional abuse scales. Although the labels of the neglect and overprotection scales seem to be contrary poles, a moderate correlation between them is not unexpected: Overprotection reflects psychological control and infringement, whereas emotional and physical neglect reflects a lack of love, care, and supervision. Both experiences often co-occur and are not incompatible. The relationship between parental overprotection and sexual abuse was not significant. This result is similar to reports of previous studies on panic, anxiety, and depression disorder samples (McGinn et al., 2005; Seganfredo et al., 2009).

The results of the present study must be considered under the methodological limitations. First, the analyses were performed with an incidental sample of clinical female subjects, and the results cannot be generalized to the nonclinical or male population. Self-reported childhood retrospective data may be subject to recall bias. Test–retest reliability, stability after therapy, and convergent validity with independent corroborative data have been reported in previous studies, and they support the accuracy of the retrospective self-assessment of childhood maltreatment using the CTQ-SF (Bernstein & Fink, 1998; Bernstein et al., 2003; Laporte & Guttman, 2001; Laporte, Paris, Guttman, & Russell, in press; Paivio, 2001). The PBI scales have shown good test–retest reliability and independence of mood state (Lizardi & Klein, 2005). Future studies should validate the CTQ-SF in male and nonclinical samples and examine the test–retest reliability and the convergent validity of the Spanish CTQ-SF using corroborative data.

In summary, the Spanish CTQ-SF showed adequate internal consistency. Furthermore, the five-factor structure of the original version was replicated in a clinical female sample. Physical neglect was the least homogenous scale. The CTQ-SF scales were associated with parental care and overprotection, except for the sexual abuse scale, which was only related to the care scales. These associations were consistent with the findings of previous research. The results of this study provide initial support for the reliability and validity of the Spanish CTQ-SF.

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Declaration of Conflicting Interests

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