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Validation of the Spanish version of the Fear of Self Questionnaire

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Keywords: OCD Fear of self Inferential confusion Appraisal FSQ	Cognitive models, from both the appraisal and inferential confusion perspectives, propose that the self is a relevant variable in the development and maintenance of obsessive-compulsive (OC) disorder. In this study, we examined the psychometric properties of the Spanish version of the Fear of Self Questionnaire (FSQ) and analyzed the role of the fear of self (the sort of person we are afraid of becoming) as a predictor of OC beliefs and symptoms. A sample of 359 non-clinical participants completed a set of questionnaires, including the FSQ. Confirmatory factor analysis replicated the original one-factor solution for both the FSQ-8- and 20-item versions. The FSQ demonstrated excellent reliability, and fear of self predicted OC symptoms and cognitions, especially unacceptable obsessions.

1. Introduction

Different cognitive models have been used to explain the development and maintenance of obsessive-compulsive disorder (OCD). Appraisal-based theories propose that the dysfunctional appraisal or misinterpretation of an intrusive thought based on specific OCD-related beliefs facilitates its conversion into an obsession (e.g., Rachman, 1997; Salkovskis, 1985). Some authors have suggested that the content of the intrusive thoughts that might turn into obsessions "will be determined not only by the general significance they (patients) attach to intrusive thoughts, but also by the themes that are most important in the patient's values system" (Rachman, 1998, p. 390), thus recognizing that the individual's self-view may also be a key element in OCD development. Obsessions have frequently been described as egodystonic, defined by Purdon, Cripps, Faull, Joseph, and Rowa (2007) as a thought "...that is perceived as having little or no context within one's own sense of self or personality" (p. 200). Moreover, it has been proposed that misinterpreted intrusive thoughts are those whose content represents a perceived failure to maintain standards in one or more obsession-relevant self-evaluative domains (García-Soriano, Clark, Belloch, del Palacio, & Castañeiras, 2012). This proposal has especially found support in the case of contamination, checking, order, or hoarding symptoms (García-Soriano and Belloch, 2012).

The inferential confusion model (O'Connor & Robillard, 1995,

1999) proposes that obsessions appear through a dysfunctional reasoning process ("inferential confusion") where the person confuses a remote possibility (the obsessional doubt) with a real probability. Thus, inferential confusion is related with how an individual conceives the context despite perception through his/her own senses in the here and now (physical perception; e.g., "I am in danger even though I see and sense nothing to support it"). Obsessional doubts arising from inferential confusion are distinct from the proposals based on the dysfunctional appraisals (e.g., Rachman, 1997); the latter being more related to the personal cognitive judgment of menace of an individual (e.g., in overestimation of threat: "I am in danger"; Aardema et al., 2006). It is proposed that both approaches could be targeting different stages in the obsessional sequence (Clark & O'Connor, 2004).

According to this inferential confusion model, the self also plays a relevant role because the contents of the obsessions are related to self-themes, such as the fear of self. In this regard, people suffering from OCD would tend to confuse the real self with the feared self, the sort of person we would be afraid to become, in the obsessional area (Aardema & O'Connor, 2007; Aardema et al., 2013). That is, people suffering from OCD would employ an erroneous reasoning process, investing more in the sort of person they could be (imagined or feared self) than in who they actually are (real self). For example, in the case of contamination obsessions, the fear of self can be related to the kind of person who could be a menace to others (contaminating others), a weak person

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Table 1

Item Description and Factor Loadings of the Fear of Self Questionnaire (FSQ).

	Descriptives			Loadings		
	М	SD	Sk	K	FSQ-20	FSQ-8
1. I often question my own character.	3.46	1.40	- 0.13	- 0.86	0.58	0.51
2. It requires constant attention to ensure I am thinking and behaving appropriately.	2.62	1.30	0.59	- 0.40	0.58	_
3. I often worry about what my inner thoughts might reveal about my character.	2.71	1.42	0.55	- 0.69	0.68	_
4. I fear perhaps being a violent, crazy person.	1.81	1.18	1.62	2.02	0.72	_
5. I can easily imagine myself as the kind of person that should definitely feel guilty.	2.09	1.33	1.28	0.85	0.63	0.62
6. I often question my moral character.	2.09	1.26	1.10	0.50	0.71	_
7. I often question my own sanity.	1.96	1.29	1.46	1.47	0.72	0.71
8. I often question my own identity.	2.07	1.34	1.25	0.74	0.72	_
9. I often question my own intentions or desires.	2.70	1.42	0.47	- 0.69	0.64	_
10. I am sometimes afraid to look inside of myself because I am afraid of what I could find.	2.09	1.36	1.22	0.54	0.77	0.75
11. I feel like a bad part of me is always trying to express itself.	1.81	1.20	1.54	1.56	0.80	_
12. I worry about being the sort of person who might do very immoral things.	1.58	1.05	2.15	4.59	0.83	0.81
13. I often worry about having a negative 'agenda'.	1.89	1.18	1.59	2.28	0.79	_
14. I am afraid of the kind of person I could be.	1.66	1.07	2.18	5.07	0.82	_
15. I often accuse myself of having done something wrong.	3.04	1.54	0.25	- 0.98	0.66	_
16. I'm afraid of the kind of person I might become if I'm not very careful.	1.95	1.24	1.43	1.39	0.80	0.82
17. I often doubt that I am a good person.	2.00	1.24	1.24	0.74	0.78	_
18. I fear becoming the sort of person I detest.	2.58	1.60	0.61	- 0.92	0.69	_
19. I often feel that I do not honestly show the negative reality inside myself.	2.26	1.36	0.95	0.02	0.78	0.80
20. I must be very careful in order to avoid doing something awful.	1.44	0.86	2.66	8.15	0.76	0.80

Note. M = mean; SD = standard deviation; Sk = skewness; K = kurtosis.

(getting contaminated easily), an irresponsible person (not taking enough care of others' heath) or of being contaminated or tainted (linked to mental contamination). The fear of self seems to be especially relevant in patients with blasphemous, sexual, and aggressive obsessions. For example, the fear of self could be related to themes like being immoral, a bad person, aggressive or the kind of person that cannot control the own impulses. Recently it has been reported that improvements in feared self-perceptions predicted improvements in both contamination and blasphemous OCD symptoms (Aardema, Wong, Audet, Melli, & Baraby, 2018).

Drawing on these theories and findings, Aardema et al. (2013) developed a measure to evaluate this construct, the Fear of Self-Questionnaire (FSQ). The original version consisted of a 41-item questionnaire (e.g., I often worry about what my inner thoughts might reveal about my character), based on the literature and clinical expertise, which was shortened to a 20-item version with a one-factor solution. The reliability of this version was excellent, and it showed adequate divergent validity with other OC-related measures. The FSQ was related to OCD symptoms and significantly predicted obsessions and obsessive-compulsive beliefs. In a second study, the authors reduced the measure to a final version with 8 items, with the same one-factor solution. The FSQ-8 was highly correlated with the FSQ-20 and showed satisfactory internal consistency.

The FSQ-20 has already been translated into Italian and validated with a sample of non-clinical participants. As in the English 20- and 8item versions, the one-factor solution was found to be satisfactory (Melli, Aardema, & Moulding, 2015). In addition, a recent study reported that the fear of possible selves is higher in OCD patients with repugnant obsessions than in OCD patients with other obsessional contents, or in patients with other disorders (eating, body dimorphic, mixed anxiety and depression) (Aardema et al., 2017). Moreover, in both of these studies with clinical OCD samples, fear of self predicted a significant proportion of variance in repugnant obsessions above and beyond general negative emotional symptoms and other cognitive domains such as obsessional beliefs or inferential confusion constructs (Aardema et al., 2017; Melli et al., 2015).

Despite the potential relevance of the fear of self construct in explaining the development and maintenance of OCD and its potential relevance as a clinical tool to help patients and clinicians understand the development of obsessions in a specific content area in order to work on the modification of the perception of the self, there are no instruments in Spanish to evaluate this construct. Because the Fear of Self Questionnaire appears to be a useful tool for assessing this dimension and has shown satisfactory psychometric properties in at least two different linguistic contexts (Aardema et al., 2013; Melli et al., 2015), the aim of the present study was to examine the psychometric properties of the Spanish version of the FSQ-20. Due to the large number of Spanish-speaking people in the world, its translation and adaptation will benefit a large number of people.

In this study, we also aimed to further test the relevance of the fear of self construct in an attempt to replicate previous findings with the FSQ-20 in the prediction of obsessive beliefs and OC symptoms. We predicted that the psychometric properties of the Spanish version of the FSQ-20 would be similar to those of the original FSQ-20. Specifically, we hypothesized that the Spanish version of the FSQ-20 would show a good approximation to the original one-factor structure, good internal consistency, and significant associations with obsessive-compulsive symptoms, especially obsessions. Moreover, we predicted that the fear of self would be related to dysfunctional beliefs and self-relevant constructs related to OCD, as well as to negative emotional states, but that the fear of self would explain an independent amount of variance, especially in the case of obsessions.

2. Method

2.1. Participants

The sample consisted of 359 adults (271 female) with a mean age of 29.16 years (range [18–65]; SD = 14.09). The majority of the participants were undergraduate students (64%), and the other participants were community volunteers. Of the 359 subjects, 14 self-reported having been diagnosed with a psychological disorder (panic disorder, n = 4; major depression, n = 3; specific phobia, n = 3; dysthymia, n = 2; generalized anxiety disorder, n = 1; social phobia, n = 1). Most of the participants were single (71.6%), with a medium-high (69%) socioeconomic level.

2.2. Measures

Fear of Self Questionnaire (FSQ-20; Aardema et al., 2013). The FSQ-20 is a 20-item questionnaire that assesses the feared self, the sort of person we would be afraid to become. Items are rated on a six-point

scale from 1 = strongly disagree to 6 = strongly agree. The wording of the items can be seen in Table 1. The FSQ-20 was translated into Spanish by one of the authors of this study (S.LL.). Afterwards, a native English speaker who was fluent in Spanish translated the Spanish version into English. The original English version and the translation were compared, and discrepancies were discussed with the primary author of the questionnaire (F.A.) until reaching an agreement. As previously reported, the original version of the FSQ-20 has shown excellent reliability (Cronbach's $\alpha = 0.97$) and adequate divergent validity (Aardema et al., 2013). In the present study, Cronbach's alpha was 0.94 for the FSQ-20 total score. In this and the rest of the questionnaires, total scores were computed by summing the scores of the different items. Also for this and the rest of the questionnaires, higher scores indicated higher trait levels of the intended measured construct.

Obsessive-Compulsive Inventory-Revised (OCI-R; Foa et al., 2002; Spanish version: Belloch et al., 2013). The OCI-R is an 18-item selfreport questionnaire that assesses distress associated with six domains of OC symptoms: washing, checking, neutralizing, obsessing, ordering, and hoarding. In the present study, we employed the Obsessing subscale (OCI-R Obsessing) and the total score on the instrument without the influence of the Obsessing scale (OCI-R Not Obsessing subscale), that is, the sum of the scores on the washing, checking, ordering, hoarding, and neutralizing subscales (e.g., "I repeatedly check doors, windows, drawers, etc."). The OCI-R has shown excellent psychometric properties in the original and Spanish versions (Belloch et al., 2013; Foa et al., 2002). In this study, the internal consistency (Cronbach's α) was 0.81 for the OCI-R Obsessing subscale and 0.86 for the OCI-R without the Obsessing subscale.

Obsessive Beliefs Spanish Inventory-Revised (OBSI-R; Belloch et al., 2010). This is a 50-item self-report questionnaire designed to evaluate dysfunctional beliefs hypothetically related to the maintenance and/or the development of the OCD (e.g., "I have the responsibility to make sure that everything is in order"). The OBSI-R has shown adequate reliability (Belloch et al., 2010). In the present study, the Cronbach's α for the total scale was 0.95.

Obsessional Concerns and Self Questionnaire (OCSQ; García-Soriano & Belloch, 2012). This 39-item self-report questionnaire assesses the extent to which respondents consider OC content domains relevant to their self-worth (e.g., "I feel better about myself knowing that I've done my best to avoid contaminating others with my germs"). The OCSQ has shown good internal consistency and acceptable convergent and discriminant validity (García-Soriano & Belloch, 2012). In the present study, the internal consistency of the total score was 0.95.

Ego-Dystonicity Questionnaire (EDQ; Purdon et al., 2007; Spanish version: Belloch, Roncero, & Perpiñá, 2012). The EDQ is a 27-item self-report that measures the ego-dystonicity associated with an unwanted thought (e.g., "No good reason to have this thought"). The EDQ has shown acceptable internal reliability and validity in the original and Spanish versions. In the present study, the internal consistency of the total score was 0.92.

Depression Anxiety Stress Scale-21 (DASS-21; Lovibond & Lovibond, 1995; Spanish version: Daza, Novy, Stanley, & Averill, 2002) The DASS-21 is a 21-item self-report questionnaire designed to measure the negative emotional states of depression, anxiety, and stress (e.g., "I found it difficult to relax"). It has shown good convergent and discriminant validity (Lovibond & Lovibond, 1995) and internal consistency (Antony, Bieling, Cox, Enns, & Swinson, 1998). The Spanish version has also shown strong internal consistency and good convergent and discriminant validity (Daza et al., 2002). In the present study, the internal consistency of the total score was 0.93.

2.3. Procedure

Students attending the 4th year of a BA program at a Spanish university were invited to participate in a study. While 175 students completed only the FSQ, 55 students completed the entire set of

questionnaires (described above). Those 55 students attended a twohour seminar in which they received training on the purpose of the research; the inclusion /exclusion criteria of the research project; how to administer the study instruments to future community participants. These 55 students recruited 129 community participants by inviting other people in their social network to participate in the study and the students received course credit for their recruitment efforts. In order to analyze test-retest reliability, these 129 community volunteers were invited to complete the FSQ again two weeks later, and 102 responded to this request. All the participants met the following inclusion criteria: age between 18 and 70 years, a good reading level, and the absence of any organic mental disorder, mental retardation, or history of substance abuse disorders. All the participants provided written informed consent prior to completing the questionnaires. The study received the approval of the Ethical Committee of the University.

2.4. Data analysis

First, we computed the descriptive analyses of the FSQ items: means, standard deviations, skewness, and kurtosis. Second, we analyzed the internal structure of both versions of the FSQ by means of confirmatory factor analysis.¹ Given the expected floor effect for several of the FSQ items, which implies a high departure from normality (e.g., "I must be very careful in order to avoid doing something awful"), we treated the responses as categorical (ULSMV estimator in Mplus). ULSMV appears to be the recommended method in these cases, particularly for small to medium sample sizes (e.g., Forero, Maydeu-Olivares, & Gallardo-Pujol, 2009). Goodness-of-fit of all the derived models was assessed with the common cut-off values for the fit indices (Hu & Bentler, 1999): CFI and TLI with values greater than 0.95 and RMSEA less than 0.06 were indicative of satisfactory fit. These cut-off values must be interpreted with caution because they were derived from models estimated with maximum-likelihood. Localized areas of strain were assessed with modification indices and standardized expected parameter changes. Third, we computed the reliability of the two versions: (a) internal consistency computed with Cronbach's alpha and (b) test-retest correlation. Fourth, we computed the inter-correlations between the different scales and age and sex in an exploratory analysis. In order to analyze the convergent validity, we explored the associations between the FSQ-20 and other OCD domains. Specifically, we used measures of OCD symptoms (OCI-R Obsessing scale, OCI-R Not Obsessing scale), cognitions (OBSI-R), and self-domains (OCSQ, EDQ). In order to control the Type I error probability, the significance level was adjusted with a Bonferroni correction (0.05/45 = 0.001). Moreover, we analyzed the associations with negative emotional states (DASS-21). Fifth, in order to analyze the relevance of the FSQ-20 in the prediction of obsessive beliefs and obsessive-compulsive symptoms, we computed three hierarchical regression models with the OCI-R Not Obsessing subscale, the OCI-R Obsessing subscale, and the OBSI-R total score as criterion variables. Each regression had three steps: (1) DASS-21 was included as the only predictor, controlling for the emotional symptoms; (2) OCSQ, EDQ, and OBSI-R (except when it was the criterion) were included, describing relevant and OCD domains; and finally, the (3) FSO-20 was included.

¹ We chose confirmatory factor analysis instead of exploratory factor analysis because with the former technique it is possible to include correlated uniqueness in the model. If no correlated uniqueness were included in the model, model fit and estimated parameters would have been equivalent for both techniques in unidimensional models. Thus, confirmatory factor analysis offers the option to include more parameters than exploratory factor analysis, if needed, with no drawbacks if not needed.

3. Results

3.1. Item descriptions, internal structure, and reliability

The content of the FSQ items can be seen in Table 1. As expected, considering that we recruited a non-clinical sample, the sample had low mean scores ($M_{\text{mean}} = 2.19$, range [1.44, 3.46]) and small standard deviations ($M_{\text{SD}} = 1.28$, range [0.86, 1.60]) on a scale ranging from 1 = strongly disagree to 6 = strongly agree. On average, items tended to show positive skewness ($M_{\text{Sk}} = 1.20$, range [-0.13, 2.66]) and kurtosis ($M_{\text{K}} = 1.27$, range [-0.98, 8.15]).

This first model (M1) with the FSQ-20 did not meet the common cut-off values for goodness-of-fit (CFI = 0.928, TLI = 0.919, RMSEA = 0.088). The higher modification index, equal to 41.0 (expected standardized parameter change = 0.45), corresponded to the correlated uniqueness between Item 2 and Item 3. In M2, we added this parameter and, although model fit was improved, it was still below the desired thresholds. Sequentially, we added new correlated uniquenesses (M3: Items 5 and 15; M4: Items 8 and 9; M6: Items 1 and 2). None of these models had CFI and TLI greater than 0.95 or RMSEA lower than 0.06. We did not test further models with the FSQ-20 because it was clear that achieving a well-fitting model required many parameters ad hoc without theoretical justification. In the final tested model with the FSQ-20, the correlated uniqueness included ranged from 0.33 to 0.45.

For the FSQ-8 responses (M6), the model fit was much better without correlated uniqueness (CFI = 0.981, TLI = 0.974, RMSEA = 0.070). Although the RMSEA was above the intended cut-off value, the maximum modification index was small -8.8-, and all the expected standardized parameter changes were below 0.29.

The item loadings for the FSQ-20 and FSQ-8 items can be seen in Table 2. In both cases, item loadings were medium-high (for the FSQ-20, $M_{\text{loading}} = 0.72$, range [.58, .83]; for the FSQ-8, $M_{\text{loading}} = 0.73$, range [.51, .82]).

The internal consistency of the scores was adequate, with Cronbach's alphas of 0.94 for the FSQ-20 scores and 0.85 for the FSQ-8 scores. The test-retest correlation with a two-week interval was strong (n = 102): r = 0.88 for the FSQ-20 and r = 0.83 for the FSQ-8.

3.2. Inter-correlations and hierarchical regression models

The inter-correlations among variables are presented in Table 3. As expected, the two versions of the FSQ were very strongly correlated. The FSQ-20 had moderate to strong correlations with the DASS-21 and the two OCI-R subscales. Associations were numerically higher between the FSQ-20 and the OCI-R Obsessing than with the OCI-R not included in the Obsessing scale (z = 2.18, p = .02). Associations between the FSQ-20 and OCSQ and EDQ were low. Associations with OCD cognitions (OBSI-R) were moderate. FSQ-20 scores tended to decrease with age and had no relation with sex. Correlations with the FSQ-8 were essentially the same as with the FSQ-20, although slightly weaker.

In the hierarchical regressions, the inclusion of the FSQ-20 scores

Table 2						
Goodness	of fit	indices	for	the	different	models.

always led to statistically significant increments in the explained variance after controlling the possible influence of emotional symptoms (DASS-21) and OCD-relevant domains (self- and non-self-related), as Table 4 shows. The FSQ explained an additional 2% of the OCI-R Not Obsessing subscale variance (R_{Model3}^2 = .42, β_{FSQ-20} = 0.19, t (124) = 2.027, p = .045); an additional 7% of the obsessional symptoms (OCI-R Obsessing; R_{Model3}^2 = .40, β_{FSQ-20} = 0.36, t(124) = 3.716, p < .001); and an additional 5% of the dysfunctional beliefs as measured by the OBSI-R (R_{Model3}^2 = .54, β_{FSQ-20} = 0.29, t(125) = 3.568, p = .001).

4. Discussion

The Spanish version of the Fear of Self Questionnaire shows good psychometric properties and excellent reliability in a community sample, retaining the psychometric properties of the original version of the instrument (Aardema et al., 2013) and replicating the properties of the Italian version (Melli et al., 2015). The factor analyses supported the unidimensional structure of the measure shown in the original (Aardema et al., 2013, 2017) and Italian (Melli et al., 2015) versions, especially for the short version (8 items). Results show excellent reliability for both versions of the FSQ through internal consistency and temporal stability, similar to reports in the original (Aardema et al., 2013) and Italian versions (Melli et al., 2015). As expected, both versions of the FSQ showed higher associations with the distress associated with the obsessions (OCI-R Obsessing) than with the other OC symptoms. This result is congruent with our hypothesis, based on theoretical proposals (O'Connor & Aardema, 2007), suggesting good convergent/ discriminant validity of the FSQ, and it is supported by previous studies using both non-clinical and clinical OCD samples (Aardema et al., 2013, 2017; Melli et al., 2015).

We expected significant associations between the fear of self and OCD cognitions, and the size of these associations could be considered to show adequate divergent validity, as previously discussed (Aardema et al., 2013). Fear of self showed strong associations with negative emotional states; this result may suggests that the fear of self as measured by the current version of the FSQ is not a construct specific. In fact, recent study with clinical samples indeed highlighted the relevance of the fear of self in anxious/depressive patients, although those with repugnant obsessions score significantly higher than those with anxiety/depression (Aardema et al., 2017). In addition, fear of self has previously shown strong correlations with depressive symptoms among non-clinical samples, but only moderate relationships between a fear of self and anxiety/depression are observed among those with OCD. Nonetheless, we cannot ignore the symptom commonalities between OCD and depressive states (Morillo, Belloch, & García-Soriano, 2007) or the high comorbidity between OCD and depression (Torres et al., 2006). Our results support this idea because the associations between negative emotional states and OCD cognitions and symptoms were also between medium and high. Overall results suggest that the fear of self construct is relevant in people who show higher emotional and OC

Models	$\chi^{2^{\dagger}}$	df	CFI	TLI	RMSEA
M1. FSQ-20	643.1	170	0.928	0.919	0.088
M2. FSQ-20 + CU (2 & 3)	604.7	169	0.933	0.925	0.085
M3. FSQ-20 + CU (2 & 3 + 5 & 15)	570.4	168	0.938	0.930	0.082
M4. FSQ-20 + CU (2 & 3 + 5 & 15 + 8 & 9)	535.5	167	0.944	0.936	0.078
M5. FSQ-20 + CU (2 & 3 + 5 & 15 + 8 & 9 + 1 & 2)	507.3	166	0.948	0.940	0.076
M6. FSQ-8	55.0	20	0.981	0.974	0.070

Notes: *df*=degrees of freedom; TLI=Tucker-Lewis index; CFI=comparative fit index; RMSEA=root mean square error of approximation; CU=correlated uniquenesses.

FSQ = Fear of Self-Questionnaire.

^{\dagger} All p-values for the chi-square test were < 0.001.

Table 3

Correlations and descriptive statistics.

	1 Correlations	2	3	4	5	6	7	8	9	10
1. FSQ- 20										
2. FSQ – 8	0.97									
OCI-R without Obsession	0.46	0.46								
4. OCI-R Obsession	0.58	0.55	0.56							
5. DASS – 21	0.65	0.64	0.42	0.52						
6. OCSQ	0.27	0.26	0.53	0.24	0.27					
7. EDQ	0.15	0.14	0.19	0.18	0.09	0.41				
8. OBSI-R	0.47	0.47	0.55	0.39	0.40	0.64	0.12			
9. Age	-0.27	-0.23	0.24	-0.04	-0.19	0.28	0.04	0.06		
10. Sex	-0.01	0.03	-0.10	-0.12	-0.08	0.02	0.01	-0.02	0.21	
	Descriptive of	lata								
n	350	355	171	174	171	175	138	161	360	359
Mean	43.84	16.77	10.77	1.62	31.00	143.12	2.76	143.20	29.16	0.25
SD	17.49	6.93	8.50	2.34	8.66	42.50	1.00	45.09	14.09	0.43

Note: Bold values correspond to statistically significant correlations after Bonferroni correction, p < .001. Sex was coded with a dummy variable, where 0 = women and 1 = men.

FSQ = Fear of Self-Questionnaire; OCI-R = Obsessive-Compulsive Inventory-Revised.

DASS-21 = Depression Anxiety Stress Scale-21; OCSQ = Obsessional Concerns and Self Questionnaire; EDQ = Ego-Dystonicity Questionnaire; OBSI-R = Obsessive Beliefs Spanish Inventory-Revised.

Table 4	
Hierarchical regressions predicting obsessive-compulsive symptoms (OCI-R) ar	d dysfunctional beliefs (OBSI-R).

	OCI–R Not Obsession			OCI-R Obs	ession	OBSI-R	OBSI-R		
Step 1	ΔR^2	ΔF	р	ΔR^2	ΔF	Р	ΔR^2	ΔF	р
	0.18	27.28	< 0.001	0.27	46.85	< 0.001	0.16	24.76	< 0.001
Step 2	ΔR^2	ΔF	р	ΔR^2	ΔF	р	ΔR^2	ΔF	р
	0.23	15.83	< 0.001	0.06	3.71	0.013	0.33	41.37	< 0.001
Step 3	ΔR^2	ΔF	р	ΔR^2	ΔF	р	ΔR^2	ΔF	р
	0.02	4.11	0.045	0.07	13.81	< 0.001	0.05	12.73	0.001
Coefficients	β	t	р	β	t	р	β	t	р
DASS	0.13	1.40	0.165	0.22	2.40	0.018	0.06	0.79	0.430
OCSQ	0.33	3.29	0.001	-0.07	-0.73	0.468	0.62	9.04	< 0.001
EDQ	-0.01	-0.18	0.859	0.12	1.49	0.138	-0.18	-2.77	0.006
OBSI-R	0.19	1.93	0.056	0.16	1.56	0.120			
FSQ-20	0.19	2.03	0.045	0.36	3.72	< 0.001	0.29	3.57	0.001

Note: Bold *p*-values correspond to those that were statistically significant, p < .05.

FSQ = Fear of Self-Questionnaire; OCI-R = Obsessive-Compulsive Inventory-Revised.

DASS-21 = Depression Anxiety Stress Scale-21; OCSQ = Obsessional Concerns and Self Questionnaire; EDQ = Ego-Dystonicity Questionnaire; OBSI-R = Obsessive Beliefs Spanish Inventory-Revised.

symptoms, especially regarding unacceptable obsessions.

The fear of self shows small significant associations with other selfrelated constructs that are relevant in OCD, such as the self-worth contingencies and ego-dystonicity. This latter result was not expected because previous research (Aardema et al., 2013) showed moderate associations between fear of self and egodystonicity. The differences between the present study and the Aardema et al. (2013) study could be due to the fact that participants appraise the ego-dystonicity of different unwanted unpleasant thoughts in each study, and as observed previously, ego-dystonicity varies across different obsessional contents and thoughts (Purdon et al., 2007). Our results suggest that the inconsistency between an unpleasant thought and the real self may not be associated with the fear of possible selves. Low associations between the fear of self and the other self-constructs could indicate limited convergent validity of the FSQ, although it could also suggest that these constructs retain different elements of the self in relation to OCD. In fact, whereas the fear of self construct evaluates the fear of possible selves, self-worth contingency constructs appraise the extent to which participants consider OC content domains (e.g., cleanliness) relevant to their self-worth. These constructs could be relevant self-variables in explaining different OCD symptoms. In fact, both the pattern of associations found in this study -the FSO maintained higher associations with Obsessing symptoms (vs OCI-R Not Obsessing), whereas the OCSQ maintained higher associations with the Not Obsessing OCI-R scale (*vs* OCI-R Obsessing)- and previous results reported in the literature (Aardema et al., 2013; García-Soriano & Belloch, 2012) support this idea. The fear of self could be relevant in explaining the emergence of pure obsessions, whereas the self-worth contingencies could have a role in the development of contamination, checking, order, or hoarding symptoms.

Regarding our second objective, to investigate the role of fear of self in obsessive-compulsive symptoms, the regression analysis confirmed its relevance in obsessive-compulsive symptoms and cognitions, especially in explaining the distress associated with unacceptable obsessions. In fact, the fear of possible selves explained a percentage of the variance in OC symptoms above and beyond the influence of negative emotional states and cognitive- and self-relevant OCD processes. This result is consistent with our hypothesis and with results from other studies on the unique contribution of the FSQ in the explanation of unacceptable obsessions (Aardema et al., 2013; Melli et al., 2015). This study also suggests that, in addition to the role played by the fear of possible selves, other self-constructs are relevant variables in explaining dysfunctional beliefs about thoughts and obsessive-compulsive symptoms different from unacceptable obsessions, thus supporting previous studies (e.g., García-Soriano & Belloch, 2012) and the need to take the self into consideration when explaining and treating obsessive-

compulsive symptoms.

Results are limited by the use of non-clinical samples. While the use of analogue samples is considered highly relevant in understanding OC symptoms (Abramowitz et al., 2014), the FSQ has shown a different pattern of relationships in clinical samples as compared to non-clinical samples (Aardema et al., 2017). Further investigation is needed in clinical samples with the Spanish version of the FSQ. Moreover, vulnerability research should be conducted on non-episodic individuals (Ingram, Miranda, & Segal, 1998). This is a cross-sectional study that does not allow us to determine the causal or etiological role of the self in the development of OCD. Longitudinal research could determine the etiological role played by the self in OCD development. Finally, it would be interesting to include specific measures to analyze the divergent validity of the instrument.

4.1. Conclusions

This study, conducted in non-clinical samples, includes the Spanish validation of the long and short versions of the Fear of Self, and it supports the psychometric properties of the original version of the instrument. Thus, Spanish-speaking researchers and clinicians can use this measure in their respective contexts: either to analyze the involvement of the fear of self in OCD and other disorders, or as a clinical tool. Moreover, this study further supports the relevance of the fear of possible selves associated with obsessive-compulsive symptoms, especially those associated with unacceptable obsessions and cognitions. If further research supports its relevance in OCD samples, OCD cognitivebehavioral therapies should address the modification of the perception of the self in treating the negative appraisals associated with the intrusions and obsessions. Recently it has been reported that improvement in feared self-perceptions predicted improvement in repugnant and obsessions and contamination symptoms in a group of OCD patients treated through different psychotherapies (Aardema et al., 2018). Moreover, future research should analyze its relevance in other disorders on the OCD spectrum. In fact, a recent study showed its relevance in body dysmorphic and eating disorders (Aardema et al., 2017), thus suggesting the possibility of developing common strategies for different disorders.

Declarations of interest

None.

Author agreement/declaration

All authors contributed to and have approved the final manuscript.

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