The Italian version of the Obsessive Compulsive Inventory: Its psychometric properties on community and clinical samples

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ABSTRACT

The aim of the study was to evaluate psychometric properties of the Obsessive Compulsive Inventory (OCI) on Italian community and clinical samples. The Italian version of the 42-item OCI was administered to a sample of 340 individuals belonging to the general population and to 88 patients with obsessive compulsive (OCD) or other anxiety disorders. Four different internal structures of the OCI were compared through confirmatory factor analysis (CFA): the figures for the model with six factors and 18 items (OCI-R) met the best criteria for adequacy of fit. The six scales showed on average a 10% of common variance in the community sample and 8% in the clinical sample. The OCI-R subscales showed good internal consistency and temporal stability, with the exception of washing and mental neutralizing subscales which showed a strong alpha coefficient only in the OCD sample. Psychometric data for the OCI-R were insensitive to age and sex, whereas an effect of education was found. Concurrent validity was demonstrated, since the OCI-R subscales showed a pattern of specific correlations with another conceptually related self-report measure. Moreover, although the OCI-R was positively correlated with measures of depression, anxiety, and worry, the correlations were weaker than those with the other measure of OCD symptoms. The OCI-R clearly differentiated OCD patients from non-OCD anxious patients and nonclinical controls with the exception of hoarding subscale. However, the hoarding scale discriminated OCD patients who presented hoarding symptoms from OCD counterparts without such symptoms. Thus, the OCI-R proved to be a reliable and valid measure of obsessive compulsive symptoms in the Italian context.

1. Introduction

Obsessive compulsive disorder (OCD) is a well-known form of psychopathology which is characterized by persistent, intrusive, and distressing obsessions (persistent thoughts, impulses, or images) or compulsions (repetitive, excessive behaviors or mental acts). Recent research on OCD underscores the considerable heterogeneity of this disorder. For example, in their review McKay et al. (2004) have identified as many as nine subtypes or replicable dimensions of OCD: contamination/washing, harming/checking, hoarding, symmetry/ordering, obsessionals, sexual and religious, certainty, sexual-somatic, and contamination/harming. Studies on OCD heterogeneity have several implications for researchers and clinicians, since obsessive compulsive (OC) subtypes may differ-

entially relate to other clinical disorders, cognitive features, neuropsychological deficits, personality traits, sociodemographic aspects, and response to treatment (e.g., Baer, 1994; Mataix-Cols et al., 2002; Minichiello, Baer, Jenike, & Holland, 1990; Sher, Frost, Kushner, Crews, & Alexander, 1989; Simpson et al., 2006; Tolin, Woods, & Abramowitz, 2003).

The heterogeneity of OCD calls for instruments that reliably assess the various empirically based symptom presentations. One measure that has been purposely designed to correspond to symptom-based models of OCD and has received extensive empirical validation is the Obsessive Compulsive Inventory (OCI; Foa, Kozak, Salkovskis, Coles, & Amir, 1998). Two different versions of the OCI have been considered in the literature: (a) the original version composed by 42 items and seven rationally derived subscales (washing, checking, doubting, ordering, obsessing, hoarding, and mental neutralizing); (b) a short version containing 18 items and six subscales (washing, checking, ordering, obsessing, hoarding, and mental neutralizing), based on factor analysis of the OCI in a US clinical sample (OCI-R; Foa et al., 2002).

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Several reports provided support for the reliability and validity of the OCI and OCI-R and showed strong convergence with established measures of OCD, moderate to high internal consistency across the various subscales, and adequate to high test–retest stability depending on the time interval (e.g., Abramowitz & Deacon, 2006; Huppert et al., 2007; Simonds, Thorpe, & Elliott, 2000). The internal structure of the OCI-R has been replicated in multiple languages including French (Zermatten, Van-der-Linden, Jermann, & Ceschi, 2006), German (Gonner, Leonhart, & Ecker, 2008), Icelandick (Smari, Olason, Eythorsdottir, & Frolunde, 2007), and Spanish (Fullana et al., 2005), whereas only one study concerned the factorial composition of the original OCI (Wu & Watson, 2003). In this study, based on a factor analysis in American undergraduate students, the authors suggested that a five-factor structure, rather than the seven rationally derived subscales, best captured the structure of symptoms measured by the OCI. In addition, Foa et al. (2002) also suggested that the proposed seven-factor structure of the original OCI may be in question.

In sum, what emerges from the literature is that the OCI-R is a robust measure of OC symptoms, whereas more studies are warranted for the OCI. On the other hand, the brevity of the OCI-R subscales (three items for each of the six dimensions) is of concern for some scholars (Clark, Antony, Beck, Swinson, & Steer, 2005), even though the OCI itself contains two dimensions composed by three items (hoarding and doubting). As such, it could be worthwhile examining both the long and short version of the questionnaire within the same study. To our knowledge, no studies have been conducted to compare the OCI and the OCI-R in a cultural context outside the US. Actually, if the OCI-R should show a stronger factor structure than OCI and good psychometric characteristics, then it would be possible to conclude that OCD may not vary substantially cross-culturally in this regard, and also may provide support for the use of the subscales of the OCI-R over the OCI. On the contrary, if a different picture would emerge (i.e., no substantial differences between the two versions or stronger characteristics of the OCI over the OCI-R), then potential cultural differences that may lead to this may be discussed.

The main purpose of the present study was therefore to evaluate the psychometric properties of both the OCI and the OCI-R on Italian community and clinical samples. Virtually no studies have tested the psychometric properties of the OCI and OCI-R on community samples, a surprising omission given theoretical assumptions that OC phenomena lie on a continuum from normality to psychopathology (e.g., Burns, Formea, Keortge, & Sternberger, 1995; Salkovskis & Harrison, 1984; Sterneberger & Burns, 1990). The OCI itself was devised to "provide an instrument that can be readily administered to both clinical and non-clinical populations" (Foa et al., 1998, p. 207). A large community sample permits study of the factor structure of the OCI, convergent and divergent validity, and examination of possible gender, age, and education effects on OCI total and subscale scores. Regarding this last issue, we hypothesized no differences in age and gender because several studies on self-reported obsessional features showed no differences across these characteristics (Kyrios, Bhar, & Wade, 1996; MacDonald & De Silva, 1999; Sterneberger & Burns, 1990).

Lastly, the clinical samples permit to evaluate the criterion-oriented and discriminant validity of the Italian version of the OCI.

2. Method

2.1. Participants and procedure

Subjects were 340 community individuals (51% male) enrolled in four different middle-size towns of Northern Italy. All participants were Caucasian. The mean age of the sample was 33.3 (S.D. = 13; range = 16–60) and the mean years of education was 15.4 (S.D. = 3; range = 8–21). Marital status was 58.2% single, 37.9% married or cohabitating, 3% separated or divorced, and 0.9% widowed. The employment profile of the total sample was: 52.1% full-time job, 33.7% students, 3.8% part time job, 2.1% unemployed, 2.1% retired, 0.9% full time homemaker, and 5.3% other. To obtain data about the temporal stability of the OCI, a subgroup of 50 participants (40% females; mean age = 27.7 years; S.D. = 5.3) completed the questionnaires on two occasions 4 weeks apart. Participants were recruited during free-access public conferences about psychological topics of general interest. We acknowledge that such form of recruitment is unusual; however, in previous studies we obtained adequate community samples through this method (e.g., Sica & Ghisi, 2007).

Clinical individuals were patients with either DSM-IV diagnosed obsessive compulsive disorder (OCD group) or any DSM-IV diagnosed anxiety disorders except OCD and simple phobia (Anxious group) as their most severe problem. Patients with secondary comorbid Axis-I or Axis-II diagnoses were included. Non-suitable patients were those with a current or past psychotic disorder, dementia, mental retardation or a current substance use disorder. In addition, anxious patients were excluded if they had a current or past obsessive compulsive disorder. OCD and anxious individuals were recruited from both two outpatient mental health clinics and 10 different private settings located in Northern and Central Italy. During the routinary assessment phase, patients were interviewed by one of the members of our research team (all Ph.D. level psychologists experienced in diagnosing psychiatric disorders) using the Structured Clinical Interview for DSM-IV (First, Spitzer, Gibbon, & Williams, 1996), to establish DSM-IV diagnoses. For OCD individuals, the most prominent obsessions and compulsions were also recorded during the interview. Although inter-rater reliability for the main diagnosis was not examined formally, each case was audio-recorded and carefully reviewed in supervisory meetings and all diagnoses were reached by rater consensus.

After being assessed, suitable patients were invited to participate in the study. All individuals participated on a voluntary basis and gave their written consent before entering the study. Eligible participants were requested to complete a battery of self-report measures administered individually. The sequence of measures was rotated to control for order effects. The final sample consisted of 52 OCD patients and 36 anxious patients (all were Caucasian). In the latter group, the frequency of each principal anxiety disorder diagnosis was as follows: 36% panic disorder without agoraphobia, 25% panic disorder with agoraphobia, 28% social phobia, and 11% generalized anxiety disorder. In addition we found that 20% had a secondary comorbid Axis-I diagnosis (major depressive disorder = 17%, dysthymic disorder = 3%) and 14% had an Axis-II diagnosis (three with avoidant personality disorder, one with dependent personality disorder and one with borderline personality disorder). In the OCD group 25.4% had a secondary comorbid Axis-I diagnosis (anxiety disorders = 10%, major depressive disorder = 15.4%) and 8% had an Axis-II diagnosis (two had dependent personality disorder, one had borderline personality disorder and one had obsessive compulsive personality disorder).

Table 1 provides descriptive statistics on various demographic variables for the two clinical groups as well as for a third group of 47 individuals, randomly selected from the sample of 340 subjects belonging to community (community controls, CC), for comparative purposes. The three groups were equivalent with respect to all demographic variables (all $ps > 0.10$). As expected, the OCD sample scored significantly higher than the anxious group ($F_{(1,83)} = 81.5$, $p < 0.001$) on the self-report version of the Yale-Brown Obsessive Compulsive Scale (Y-BOCS; Goodman et al.,