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Symptom dimensions in obsessive–compulsive disorder: From normal cognitive intrusions to clinical obsessions

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ABSTRACT

Cognitive behavioral models of obsessive–compulsive disorder (OCD) assume continuity between normal obsessional intrusive thoughts (OITs) and obsessions. However, this assumption has recently been criticized. This article examines this issue using a new instrument (the Obsessional Intrusive Thoughts Inventory, INPIOS) specifically designed to assess the frequency and content of 48 OITs, which was completed by 734 community subjects and 55 OCD patients. Confirmatory factor analysis suggests six first-order factors included in two second-order factors, one containing aggressive, sexual, religious, immoral and repugnant OITs, and the other containing contamination, doubts and checking, symmetry and order, and superstition OITs. This structure integrates the research on OC symptoms and OITs. The INPIOS showed excellent known-groups validity, and it adequately represented obsessions as well as OITs. OCD and community subjects experience OITs representative of all types of obsessional contents. The dimensional structure is discussed in terms of OIT/obsessive–compulsive symptom structures currently proposed.

1. Introduction

Cognitive models of obsessive–compulsive disorder (OCD) assume that obsessions constitute extreme variants of unwanted obsessional intrusive thoughts (OITs) experienced by the general population, thus ascribing to a dimensional perspective of OCD symptoms. Nevertheless, this assumption has been questioned based on findings that community participants only experience a limited number of intrusions with content similar to that of clinical obsessions (Rassin, Cougle, & Muris, 2007; Rassin & Muris, 2007). However, the vast majority of studies, beginning with the pioneering work by Rachman and de Silva (1978), indicate the opposite: that is, that unwanted intrusive cognitions with the same contents as clinical obsessions are experienced by 80–90% of non-clinical participants (e.g., Belloch, Morillo, Lucero, Cabedo, & Carrió, 2004; Edwards & Dickerson, 1987; Freeston, Ladouceur, Thibodeau, & Gagnon, 1991; Niler & Beck, 1989; Parkinson & Rachman, 1981; Purdon & Clark, 1993, 1994a, 1994b). Since cognitive-behavioral therapy (CBT) models of obsessions propose that clinical obsessions have their origins in normal obsession-like intrusive thoughts, evidence of qualitative differences between non-clinical and clinical intrusive thoughts would constitute a serious challenge to the internal validity of CBT models.

A closely related unresolved question concerns whether there are meaningful subtypes of obsessional symptomatology. Most studies addressing this question have used the Symptom Checklist of the Yale-Brown Obsessive–Compulsive Scale (Y-BOCS-SC; Goodman et al., 1989a, 1989b). From a categorical perspective, efforts have been made to classify OCD patients into distinct symptom-based subgroups or subtypes in which each individual is assigned to a unique OC category (Abramowitz et al., 2003; Calamari et al., 1999, 2004). In general those studies found between 5 and 7 domains (e.g., harming, contamination, hoarding, symmetry, and unacceptable thoughts). Alternatively, other researchers have adopted a more dimensional approach involving exploratory research into the symptom dimensions that adequately capture OCD diversity. This latter perspective is more consistent with cognitive models of OCD. Several studies have found that OCD symptoms can be grouped into four factors: symmetry and order, contamination and washing, blasphemy and sexual obsessions, and hoarding (Cullen et al., 2007; Feinstein et al., 2003; Hasler et al., 2006; Leckman et al., 1997; Matsunaga et al., 2008; Summerfeldt, Richter, Antony, & Swinson, 1999). However, other studies found different factor solutions (e.g., Baer, 1994; Denys et al., 2004; Mataix-Cols, Rauch, Manzo, Jenike, & Baer, 1999; Pinto et al., 2008). There are also inconsistencies across studies in the symptom terms that load on

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each factor (e.g., Cullen et al., 2007; Hasler et al., 2006). This confusion could stem from basing factor analyses on the 13 rationally derived Y-BOCS-SC checklist symptom categories (Denys et al., 2004; Feinstein et al., 2003; Pinto et al., 2008), which exclude the miscellaneous category, and may not be able to capture the prominent dimensions of OCD symptom content (e.g., Bloch et al., 2008; Pinto et al., 2008; Summerfeldt et al., 1999). Another limitation is that the majority of these studies rely on a dichotomous scale (present vs. absent), which restricts the scoring range and, therefore, is not the best way to assess the dimensionality of OCD symptoms (Mataix-Cols et al., 2005; Wu et al., 2007).

A different way to appraise OC symptom dimensions is through an analysis of obsessional intrusive thoughts (OITs) in clinical and nonclinical samples. A variety of instruments has been utilized to identify the OITs experienced by non-clinical participants (e.g., Edwards & Dickerson, 1987; Freeston et al., 1991). However, these measures have significant limitations in construct validity that restrict assessment of OCD-relevant OITs (Clark & Purdon, 1995; Julien et al., 2007). In their review, Julien et al. (2007) concluded that the Revised Obsessional Intrusions Inventory (ROII; Purdon & Clark, 1993, 1994b) is one of the best measures of OITs. Studies analyzing OITs' dimensionality using the ROII consistently found two main factors (Belloch et al., 2004; Lee & Kwon, 2003; Moulding et al., 2007; Purdon & Clark, 1993), one including aggressive, sexual and immoral OITs and the other including doubts, fears of contamination and checking OITs. Nevertheless, the ROII has several shortcomings, such as a limited presentation of clinically relevant obsessional themes (i.e., religion, order/symmetry, or superstition). Moreover, some items are written in a highly specific manner, which may lead to the assessment of highly idiosyncratic or situation-specific cognitions.

In an effort to overcome these limitations, we developed a new self-report measure that allows for a more precise assessment of OIT frequency and expands on item content to provide a broader representation of obsessional content. This instrument, the Obsessional Intrusive Thoughts Inventory (INPIOS; García-Soriano, 2008), was derived from the ROII.

The main objective of the present study is to investigate the similarities and differences in OIT content of clinical and nonclinical individuals, and to determine the specific relation between content dimensions and symptoms in clinical and nonclinical samples. More specifically, what are the key content domains of OITs in non-clinical individuals, and how well does this map onto the obsessional content seen in OCD? Second, what is the level of specificity between obsessional thought content and OC symptoms, and does this differ between OCD clinical samples and healthy controls? And third, how well does the INPIOS capture the core symptom dimensions of OCD?

2. Methods

2.1. Participants

Two groups of subjects participated in the study. The first group consisted of 734 non-clinical community adults (63.90% women), ranging in age from 16 to 60 years (29.47 ± 12.27 years), who did not take part in any of the pilot studies carried out during the development of the INPIOS. Most individuals were single (66.20%) and reported a medium socio-economic level, following the parameters of the Spanish National Institute of Statistical (74.70%), with high school or first-level University education (88%). The second group was composed of 55 OCD patients (49.1% women; age range from 18 to 54 years, mean age = 35.83 ± 12.70 years). Most of them (63.80%) had a medium socio-economic level and high school or first-level university education (78%). 48.1% were single, and 42.6% were married.

All 55 OCD patients met DSM-IV-TR diagnostic criteria for OCD and the diagnostic criteria were confirmed using the Anxiety Disorder Interview Schedule for DSM-IV: Lifetime version (ADIS-IV-L; Di Nardo et al., 1994). On average, OCD patients had a severe disorder (Yale-Brown Obsessive–Compulsive Scale-total $M \pm SD$ score: 25.19 ± 6.90), and the duration of their disorder was 11.24 ± 9.27 years. At the time of the study, none of the OCD patients had clinically significant co-morbid depression or anxiety disorders other than OCD, although the majority of the patients scored high on depression (Beck Depression Inventory-II mean = 21.96 ± 12.37). Based on the ADIS-IV-L, several OCD patients had a past history of: major depression (2 patients), panic disorder (3 patients), specific phobia (1 patient), social phobia (2 patients), dysthymia (1 patient) or generalized anxiety disorder (2 patients).

3. Measures

The Obsessional Intrusive Thoughts Inventory (Spanish original version: "Inventario de Pensamientos Intrusos Obsesivos", INPIOS; García-Soriano, 2008) is a self-report questionnaire designed by the authors based on the ROII (Purdon & Clark, 1994a, 1994b) to assess frequency of unwanted obsessional intrusive thoughts, images and impulses, as well as the appraisals and control strategies associated with participants' most upsetting intrusive thought. Similar to the ROII, the INPIOS includes initial instructions that provide a detailed definition of obsessional intrusive thoughts. The first part of the questionnaire consists of a list of unwanted intrusive thoughts, images, and impulses with content similar to clinical obsessions. Items are clustered under scenarios most likely to trigger the thought (e.g., When in a high place (like a cliff, bridge, high building, etc.), I have had mental intrusions of: "Jumping off a high place", "Pushing someone off a high place").

To improve on item content, the INPIOS places greater emphasis on images as a form of intrusions. Some ROII items were rewritten to make them more representative of clinical obsessions. The INPIOS excluded non-clinical intrusions, and it expanded the range of clinical intrusions to cover a wider range of obsessional content (e.g., superstition). In addition, two open-ended items were added in order to identify highly idiosyncratic obsessional content.

The initial INPIOS contained a pool of 64 items that was eventually reduced to 48 items (+two open items). Some items were deleted based on insufficient comprehensibility as determined by a group of doctoral psychology students or a low frequency as indicated by a community pilot sample ($N = 168$). A principal component analysis with promax rotation was conducted on a sample of 563 community participants. Statistically, the six-factor solution was the best structure, accounting for 52.96% of the variance. The first factor explained 27.31% of the variance and included items about sexual, religious, immoral and repugnant OITs; the second factor included doubts, mistakes, and necessity to check OITs (10.65% variance explained); the third factor included aggressive OITs (4.20% variance explained); the fourth factor was about contamination OITs (4.10% variance explained); the fifth factor grouped superstition items (3.55% explained variance); and the last factor included order items (3.20% explained variance). The entire process is available on request from the first author.

In summary, the first part of the INPIOS consists of 48 items (+2 open-ended items) that measure the frequency of unwanted intrusive thoughts, images, and impulses. Respondents rate each statement on a 7-point scale from 0 ("*I have never had this intrusion*") to 6 ("*I have this intrusion frequently during the day*"). The INPIOS total scale and subscales are computed as the average frequency of the thoughts actually experienced by the subject at least once in his/her life. That is, INPIOS total/subscale scores are divided by the number of items (total/subscale) with a frequency ≥ 1 (see Morillo et al., 2007).