Journal of Obsessive-Compulsive and Related Disorders 9 (2016) 16–23

Contents lists available at ScienceDirect

Journal of Obsessive-Compulsive and Related Disorders

journal homepage: www.elsevier.com/locate/jocrd

Sensitivity to change in the Obsessive Compulsive Inventory: Comparing the standard and revised versions in two cohorts of different severity

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ARTICLE INFO

Article history:
Received 20 October 2015
Received in revised form
2 February 2016
Accepted 9 February 2016
Available online 9 February 2016

Keywords:
Obsessive Compulsive disorder
Obsessive Compulsive Inventory
Psychometrics
Cognitive behavior therapy

ABSTRACT

The Obsessive Compulsive Inventory (OCI) is often used as a screening instrument for symptoms of Obsessive–Compulsive disorder (OCD) and as an outcome measure for treatment. Three versions of the OCI are available: the original 42-item version, the revised 18-item version (OCI-R) and a shorter version that focuses on the highest subscale (OCI-R Main). Our aim was to determine sensitivity to change and evaluate cut-off scores for caseness in each version of the OCI using the same dataset. Method: We compared the effect size and the number of patients who achieved reliable and clinically significant change after cognitive behavior therapy in two samples of out-patients with OCD. One sample ($n=63$) had OCD of minor to moderate severity and a second sample ($n=73$) had severe, treatment refractory OCD. Results: The OCI-R is a valid self-report outcome measure for measuring change and is less burdensome for patients to complete than the OCI. Questions remain about whether the OCI or OCI-R is sufficiently sensitive to change for a service evaluation. We would recommend a slightly higher cut-off score of ≥ 17 on the OCI-R for the definition of caseness. Discussion: In both samples, the OCI and OCI-R had very similar treatment effect sizes and to a lesser extent in the percentage who achieved reliable improvement and clinically significant change. The OCI-R Main was more sensitive to change than the OCI or OCI-R in both samples. All versions of the OCI were less sensitive to change compared with the Yale-Brown Obsessive Compulsive Scale (Y-BOCS).

1. Introduction

1.1. Sensitivity to change in the Obsessive Compulsive Inventory: comparing the standard and revised versions in two cohorts

The Obsessive Compulsive Inventory (OCI) is a self-report screening questionnaire to identify symptoms of Obsessive–Compulsive disorder (OCD) and for measuring outcome after treatment (Foa, Kozak, Salkovskis, Coles, & Amir, 1998). It is a 42-item instrument which was introduced to assess a more comprehensive range of symptoms compared with older self-report measures such as the Compulsive Activity Checklist (Marks, Hallam, Connolly, & Philpott, 1977) or the Maudsley Obsessive Compulsive Inventory (Hodgson & Rachman, 1977). The authors subsequently developed the OCI-Revised (OCI-R), which is a shorter 18-item version derived from the original 42 items (Foa et al., 2002). Both the standard OCI and OCI-R have been shown to be reliable and valid measures of OCD (Abramowitz, Tolin, & Diefenbach, 2005; Sica et al., 2009). Randomized controlled trials of cognitive behavior therapy (CBT) for OCD have used the OCI (Rowa et al., 2007) and the OCI-R (Andersson et al., 2012). However there are no identifiable RCTs or case series of pharmacological interventions that have used the OCI or OCI-R.

Another important role for the OCI is for evaluation of a clinical service. One national service that has adopted the standard OCI is the Improving Access to Psychological Therapies (IAPT) service in the UK. It is an ambitious program designed to expand the availability of evidence based psychological therapies within the state National Health Service (Clark et al., 2009). The IAPT service includes CBT for OCD, which is commonly delivered weekly over 12–15 sessions. Some services also deliver self-help or computerized CBT for OCD supported by a Psychological Wellbeing Practitioner, usually over the telephone. A few patients may have medication for OCD optimized by their family doctor but this is not the focus of the service. A minimum data set of standardized outcome measures is required for all IAPT services, which allows weekly

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http://dx.doi.org/10.1016/j.jocrd.2016.02.001
2211-3649/

monitoring of progress. Thus, all patients within IAPT services complete a dataset of weekly measures including: (a) the Patient Health Questionnaire (PHQ−9) (Lowe, Kroenke, & Herzog, 2004), (b) the Generalised Anxiety Disorder questionnaire (GAD−7) (Spitzer, Kroenke, Williams, & Löwe, 2006), (c) the IAPT Phobia Scales (IAPT, 2008), (d) the Employment and Benefit Status (IAPT, 2008), and (e) the Work and Social Adjustment Scale (Mundt, Marks, Shear, & Greist, 2002). The advantage of weekly measures is that it enables a high level of pre- and post-completion rate. Thus, one of the original demonstration sites had a 98% completion rate of their outcome measures (Clark et al., 2009). Since then, a completion rate of 91% has been achieved for the weekly measures across all services in routine care (Gyani, Shafran, Layard, & Clark, 2013). This is important as patients who fail to provide post-treatment outcome data do less well (Gyani et al., 2013). A report on the first million patient treated has been published (IAPT, 2012). The outcome scores may be aggregated across services to compare the performance of a service and whether this is associated with particular factors.

In addition to the weekly measures, a number of specific measures for anxiety disorders have been adopted as an alternative to the GAD−7 (Spitzer et al., 2006). The standard version of the OCI (Foa et al., 1998) (distress rating) is the measure adopted to monitor the outcomes in OCD. However, no national outcome scores for the IAPT service have yet emerged using the OCI in the treatment of OCD. One problem with the OCI is that there are 42 items requiring completion. This is approximately double the number of items compared with other disorder specific measures in IAPT such as the Social Phobia Inventory (SPIN) (Connor et al., 2000) which contains 17 items, or the Impact of Events Scale-Revised, for symptoms of Post-Traumatic Stress Disorder (Weiss & Marmar, 1997), which is comprised of 22 items. A self-report questionnaire may be especially problematic for some people with OCD who have problems of indecisiveness, not completing a questionnaire until it feels “just right” or have re-reading or re-writing compulsions, all of which may increase the time taken. One option for IAPT and other clinical services may be to adopt the shorter OCI-R instead.

A good clinical outcome in IAPT currency is based on the comparison of pre-and post-treatment scores on the symptom measures for each patient. Under a payment by results scheme, part of the payment is triggered only when the degree of improvement exceeds the minimum that would be considered as reliable if it exceeds the measurement error of repeat reliability (Jacobson & Truax, 1991). This is calculated as ≥32 on the OCI (distress only) (http://www.iapt.nhs.uk/pbr/currency-model-description/clinical-outcomes/). If change exceeds this amount, the size of the payment depends on how far the person has moved towards recovery by the number who no longer achieve “caseness”. Caseness is the threshold at which it is appropriate to initiate treatment in IAPT and defined as ≥40 on the OCI. A patient is deemed to have then “recovered” in IAPT if they have moved from a score of caseness or above pre-treatment to below caseness post-treatment.

Another option is for a service to adopt an even shorter version of the OCI-R, the OCI-R Main (Abramowitz et al., 2005), which consists of the highest scoring subscale of the OCI-R. There are 6 subscales (washing, checking, ordering, obsessing, hoarding, neutralizing) on the OCI-R and each subscale has just 3 items. Therefore the highest scoring subscale can be used as the pre-post measure. Abramowitz et al. (2005) evaluated the sensitivity to change and specificity of response to the OCI-R and the OCI-R Main in 77 patients who received CBT. They found that the OCI-R was sensitive to pre-post change and that the changes reflected improvement in OCD and related symptoms of depression, anxiety, and global functioning. In this study, the empirically derived cut-off to determine clinically significant improvement in the OCI-R was a change score of ≥21 and for the OCI-R Main, ≥8 (Abramowitz et al., 2005). Whatever version of the OCI is adopted, it is important to be confident in validity and sensitivity to change before proposing to adopt the OCI-R or OCI-R Main more widely instead of the OCI and that it is sufficiently sensitive to change for a fair payment by results.

A higher level of stepped care is available for those patients who are considered to have severe treatment refractory OCD (Drummond et al., 2008). Patients in this category are either treated as out-patients, or may be admitted to a residential unit (Veale et al., 2015) or in-patient care (Boschen, Drummond, Pillay, & Morton, 2010). To access this stream of state funding the patient must have a Yale-Brown Obsessive–Compulsive Scale (Y-BOCS) (Goodman et al., 1989) score of 30 or above, and have failed two trials of CBT with exposure and response prevention of adequate duration, two trials of SSRI or clomipramine at adequate dose and duration, and one trial of augmentation of the SSRI. In this out-patient service, they typically receive 16−24 sessions of CBT by an experienced therapist, often supplemented by a home visit or family interventions. Some patients in this sample may have their medication optimized near the beginning of treatment.

The aim of this study was therefore to evaluate the OCI, the OCI-R and the OCI-R Main in two samples – one with OCD of moderate severity in an IAPT setting and one with severe treatment refractory OCD. The same dataset was used for all versions of the OCI and allowed comparison of the effect size in each version. As far as we are aware, this is the first study to use all versions of the OCI in the same dataset to examine sensitivity to change. The specific aims of this study were therefore to determine (1) which of the different versions of the OCI, the OCI-R, or the OCI-R Main are sensitive to change in two samples of OCD patients, (2) to compare sensitivity to change in the severe treatment refractory service with the observer rated Y-BOCS (Goodman et al., 1989), (3) to recommend a cut-off score on the OCI-R for the definition of caseness in the IAPT currency.

2. Method

2.1. Participants

All patients had a diagnosis of Obsessive–Compulsive disorder as their main problem (American Psychiatric Association, 2000). There were two out-patient samples seen for treatment at the Centre for Anxiety Disorders and Trauma (CADAT) at the Maudsley Hospital: (a) those attending as part of an IAPT service (equivalent to primary care) and (b) those attending as part of a severe treatment refractory service (equivalent to tertiary care). Both samples had a diagnosis of OCD using a Structured Clinical Diagnostic Interview for DSM-IV (First, Spitzer, Gibbon, & Williams, 2002).

The mean age for patients in the IAPT sample was 32.9 years (SD 10.17) with an age range from 19 to 57 years old, while for patients in the severe treatment refractory service the mean age was 34.75 years (SD 10.28) with a range of 17 to 58 years old. The average length of treatment in the IAPT sample was 14.76 sessions (SD 3.89) with a minimum number of sessions of 9 and a maximum of 26. In the severe treatment refractory service the average length of treatment was 21.93 sessions (SD 8.59) with a minimum of 6 sessions and maximum of 58 sessions. All other demographic details are shown in Table 1.