The preliminary development of a new self-report measure for OCD in young people

Roz Shafran*, Ian Frampton, Isobel Heyman, Martina Reynolds,
Bethany Teachman, S. Rachman

Oxford University Department of Pschiatry, Warnefond Hospital, Oxford OX3 7JX, UK

Abstract

The aim of this study was to develop a reliable self-report instrument to assess obsessive–compulsive disorder (OCD) in young people. The children's Obsessional Compulsive Inventory (CHOCI) had good internal consistency, criterion validity and was significantly correlated with the Children's Yale-Brown Obsessive Compulsive Scale (CY-BOCS). This preliminary new measure could serve to provide a more efficient and accessible way of assessing OCD in young people.
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1. Introduction

Obsessive–compulsive disorder (OCD) is an anxiety disorder that is estimated to affect 0.5–2% of children and adolescents (Zohar, 1999). Most people with OCD have both obsessions and compulsions and the presentation is similar to that in adulthood (Swedo, Rapoport, Leonard, Lenane & Cheslow, 1989). It can be difficult to assess OCD in young people for several reasons. Being unable to articulate mental phenomena and simply being overwhelmed by attending a psychiatric clinic are important factors contributing to assessment difficulties in young people. Like adults, young people with OCD have good insight into the unnecessary nature of their rituals and obsessions, and often feel foolish and vulnerable about revealing their symptoms.

The most common assessment measure of OCD in young people is the children's Yale-Brown Obsessive –Compulsive Scale (CY-BOCS; Goodman, Rasmussen, Price et al., 1986) but this is an interviewer-based measure. There is also a need for a reliable and valid self-report measure of the OCD in this population, particularly as children might under-report (or over-report) their OCD

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*Corresponding author.
E-mail address: roz.shafran@psych.ox.ac.uk (R. Shafran).

symptoms during interview. Self-report measures are time-efficient and can act as a useful screening for symptoms of OCD in the general population.

The most commonly used questionnaire that focuses on OCD in the younger population is the Leyton Obsessional Inventory, Child Version (LOI-CV; Berg, Whitaker, Davies, Flament & Rapoport, 1988), an extension of a scale originally devised to assess 'houseproud housewives' (Cooper, 1970). However, the LOC-CV has a high false-positive rate (see Wolff & Wolff, 1991) and poor test–retest reliability for the 8–10-year olds (King, Inglis, Jenkins, Myerson, & Ollendick, 1995). Furthermore, it lacks predictive validity (Berg et al., 1989) as people in the subclinical range on this measure do not go on to develop the disorder. The aim of the current study was to develop a reliable self-report questionnaire that distinguished between clinical and non-clinical samples, and which had good concurrent validity.

2. Method

2.1. Clinical sample

Participants were recruited from two sources:

(1) Twenty-four consecutive people referred to the Maudsley Specialist OCD Clinic for children and adolescents.
(2) Eighteen people referred from secondary referral sources of (a) the anxiety disorder unit at Vancouver Hospital, (b) clinicians in Vancouver, (c) the University of British Columbia Psychology Clinic.

2.2. Inclusion criteria

(a) Met diagnostic criteria for OCD according to the Diagnostic and Statistical Manual American Psychiatric Association, 1994). Diagnoses were made at the Vancouver site according to The Diagnostic Interview Schedule for Children—3: Child Version and Parent Version (Shaffer et al., 1996). At the specialist OCD clinic at the Maudsley Hospital, the routine semi-structured clinical interview by the lead psychiatrist or clinical psychologist was used to establish the diagnosis.
(b) Seventeen years old or younger.

2.3. Non-clinical sample

Forty-six British schoolchildren with no known psychiatric disorder completed the questionnaire as part of a larger study (see Reynolds, Brewin & Saxton, 2000). The children were put in groups of four by the school to complete the questionnaires, and the groups were mainly of single sex.

2.4. Measures

Standardized interviews. The Children's Yale-Brown Obsessive–Compulsive Scale (CY-BOCS; Goodman et al., 1986) is the most widely used instrument for assessing the severity of obsessive

and compulsive symptoms in children. The scale has well-established psychometric properties (Scahill et al., 1997; de Haan, Hoogduin, Buitelaar, & Keijsers, 1988; Franklin et al., 1998).

2.5. Development of the children's obsessional compulsive inventory (ChOCl)

The inventory was designated for clinical assessment of symptoms, both in terms of content and severity. The items to assess symptoms were based on a revision of the Maudsley obsessional compulsive inventory (Thordarson, Rachman, & Radomsky, 1996) and were rated on a three-point scale of 1–3 corresponding to 'not at all', 'somewhat' and 'a lot.' In addition, the inventory contained 'impairment' sections corresponding to the five items of the CY-BOCS scale assessing severity of obsessions and the five items of the CY-BOCS scale assessing severity of compulsions. The equivalent of a self-report CY-BOCS scale (termed 'impairment total') within this inventory was desirable since the interviewer-based CY-BOCS scale is the 'gold standard' in this type of work (Scahill et al., 1997). Following the format of the CY-BOCS, the rating of symptoms of compulsions was followed by a rating of severity and the rating of obsessional symptoms was followed by a rating of severity.

The scale therefore contained the following:

(1) Symptoms of compulsions.
(2) Impairment associated with compulsions.
(3) Obsessional symptoms.
(4) Impairment associated with obsessions.

The scale took approximately 15 min to administer and 5 min to score. Scores were summed separately for the symptoms section and for the severity section of obsessions and compulsions. The parent who was most familiar with their child's obsessional companies was asked to complete a parent version of the scale asking about their child's symptoms.

3. Results

3.1. Descriptives

The mean age of the sample at the Vancouver Clinic was 13.4 (S.D. = 2.7; range 7–17) and 44% were female. At the London Clinic, the mean age was 13.2 (S.D. = 2.3; range 10–17) and 50% were female. Thirty-nine per cent of non-clinical participants were female and the mean age of this group was 10.7 (S.D. = 1.3; range 8–13). There were no significant differences between the clinic samples in London and Vancouver in terms of age ($t(40) = 0.245$, n.s.) or sex ($t(40) = 0.21$, n.s.).

3.2. Group differences

As expected, multivariate tests of main effects of group on child-reported (CHOCI) scores indicated significant differences between the three samples ($F(8,134) = 14.61$, $p < 0.001$). However, post hoc tests for individual impairment and symptom scores using Tukey's HSD test showed that

there were no significant differences between the two clinical samples on any of the measures, the two clinical samples were therefore combined for further analyses.

3.3. Reliability

Cronbach's alpha coefficient indicated a high level of internal consistency for all four of the subscales of the CHOCI ($\alpha > 0.8$). In addition, the five obsession items and five compulsion items had strong item-total correlations ($r = 0.56-0.89$, all $p < 0.01$) for both child and parent informants, with the exception of the Resistance item for child informants which was correlated $r = 0.4$ ($p < 0.05$) with obsession total and $r = 0.24$ ($p < 0.05$) for compulsion total.

There were significant positive correlations between child and parent ratings of impairment due to compulsions ($r = 0.53$; $p < 0.01$). However, there were no significant correlations between child and parent ratings of impairment due to obsessions.

3.4. Concurrent validity

The child-completed CHOCI scores for obsessions, compulsions and total impairment correlated significantly with CYBOCS total (range $r = 0.38-0.49$, $p < 0.05$ or better, see Table 1). Higher correlations were found between the parent-completed CHOCI impairment scores and CYBOCS total (range $r = 0.60-0.65$, all $p < 0.01$) than the child-completed CHOCI impairment scores and CYBOCS total (range $r = 0.38-0.49$, all $p < 0.05$).

3.5. Discriminant validity

Defining a CHOCI total impairment score of > 17 as the cut-off point for caseness to compare against independent OCD diagnosis gave a sensitivity of 88% and a specificity of 95%. Univariate ANOVAS recorded in Table 2 illustrate that there are significant differences between the clinical and non-clinical samples on all measures if symptoms and impairment.

Table 1
Mean total scores on child and parent CHOCI and correlation with CYBOCS total (N's vary due to missing data)

Measure	N	Mean (s.d.)	Correlation with CYBOCS total score
Child CHOCI impairment			
Obsessions	35	11.63 (4.13)	0.38*
Compulsions	37	12.03 (2.83)	0.49**
Total	33	23.61 (6.43)	0.42*
Parent CHOCI impairment			
Obsessions	28	12.57 (4.74)	0.60**
Compulsions	35	12.91 (3.42)	0.61**
Total	28	25.32 (7.64)	0.65**

*$P < 0.05$.
**$P < 0.01$.

Table 2
Univariate comparisons for child-rated CHOCI

	Clinical $n = 42$ mean (s.d.)	Non-clinical $n = 46$ mean (s.d.)	P
CHOCI—child completed			
Obsessions symptom total	19.47 (5.60)	16.5 (3.72)	<0.05
Obsessions impairment total	11.63 (4.13)	3.56 (3.60)	<0.001
Compulsions symptom total	34.53 (6.35)	26.83 (5.49)	<0.001
Compulsions impairment total	12.03 (2.83)	3.84 (3.46)	<0.001
Impairment grand total	23.61 (6.42)	7.58 (6.11)	<0.001

4. Discussion

The CHOCI is a new self-report measure to assess obsessive–compulsive symptoms in children and adolescents. It is in an early stage of development but it has been shown to have good internal consistency, and discriminates between people with OCD and school children with no known psychiatric disorder. There is a strong association between the questionnaire CYBOCS completed by the parents and the interviewer-based CYBOCS in which the young person is asked questions directly.

There are a number of areas that require improvement and continued research. First, the obsessional symptom subscale of the CHOCI discriminated least well between people with OCD and schoolchildren with no known psychiatric disorder. It stands in need of revision and consequently the obsessional symptom subscale and the compulsion symptom subscales have been revised according to item-total correlations and the ability of the item to discriminate between people with OCD and controls. Second, the self-report CHOCI impairment subscales discriminated best between people with OCD and schoolchildren with no known psychiatric disorder and it may not be necessary to preface these impairment subscales with symptom checklists.

Clinically, the CHOCI performed well against physician-rated diagnostic status, and in this study a cut-off was established with good sensitivity and specificity. Further studies will be needed to explore how the CHOCI can be used as a screening measure in population studies and to investigate whether the scale is sensitive to change with treatment. At the very least, it is hoped that the CHOCI will provide an adjunct to clinical interviews and may serve to open up areas for discussion in the reticent patient.

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