# Telephone Cognitive-Behavioral Therapy for Adolescents With Obsessive-Compulsive Disorder: A Randomized Controlled Non-inferiority Trial

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**Objective:** Many adolescents with obsessive-compulsive disorder (OCD) do not have access to evidence-based treatment. A randomized controlled non-inferiority trial was conducted in a specialist OCD clinic to evaluate the effectiveness of telephone cognitive-behavioral therapy (TCBT) for adolescents with OCD compared to standard clinic-based, face-to-face CBT. **Method:** Seventy-two adolescents, aged 11 through 18 years with primary OCD, and their parents were randomized to receive specialist TCBT or CBT. The intervention provided differed only in the method of treatment delivery. All participants received up to 14 sessions of CBT, incorporating exposure with response prevention (E/RP), provided by experienced therapists. The primary outcome measure was the Children's Yale–Brown Obsessive-Compulsive Scale (CY-BOCS). Blind assessor ratings were obtained at midtreatment, post-treatment, 3-month, 6-month, and 12-month follow-up. **Results:** Intent-to-treat analyses indicated that TCBT was not inferior to face-to-face CBT at posttreatment, 3-month, and 6-month follow-up. At 12-month follow-up, there were no significant between-group differences on the CY-BOCS, but the confidence intervals exceeded the non-inferiority threshold. All secondary measures confirmed non-inferiority at all assessment points. Improvements made during treatment were maintained through to 12-month follow-up. Participants in each condition reported high levels of satisfaction with the intervention received. **Conclusion:** TCBT is an effective treatment and is not inferior to standard clinic-based CBT, at least in the midterm. This approach provides a means of making a specialized treatment more accessible to many adolescents with OCD. Clinical trial registration information–Evaluation of telephone-administered cognitive-behaviour therapy (CBT) for young people with obsessive-compulsive disorder (OCD); http://www.controlled-trials.com; ISRCTN27070832. J. Am. Acad. Child Adolesc. Psychiatry, 2014;53(12):1298–1307. **Key Words:** OCD, psychotherapy, CBT, telehealth

Obsessive-compulsive disorder (OCD) in children and adolescents is a chronic disorder that can cause functional impairment across multiple life domains.[1,2] Estimates suggest that approximately 1 in 100 young persons suffers from OCD.[3] Cognitive-behavioral therapy (CBT) incorporating exposure and response prevention (E/RP) is the recommended psychological treatment for pediatric OCD.[4,5] However, CBT is not readily available to all who need it because of a variety of factors, and geographical and financial barriers prevent many from receiving treatment.

Telehealth is an area of mental health practice that offers significant potential for improving access to specialized treatments.[6] Telehealth involves the use of telecommunication tools (e.g., telephone, Internet, video-conferencing) as a means for health professionals to provide treatment remotely. Telehealth applications of psychological treatments have grown in popularity, as they have shown effectiveness[7] but also offer additional benefits such as reduced time and

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cost.[8] A number of recent controlled trials demonstrate efficacy of telehealth interventions for adult mental health disorders; examples include social phobia,[9] depression,[10] and OCD.[11,12] Increasingly, there is evidence of successful piloting telehealth interventions for childhood disorders, including a pilot study of webcam-delivered CBT for adolescent OCD,[13] tic disorders,[14] and depression.[15] Telehealth treatment typically entails the same components as conventional face-to-face CBT but is simply delivered remotely, via a device.

Within the variety of telehealth methods available, telephone CBT (TCBT) has some important advantages for service providers and users, including relative ease of administration.[16] There is no need for hi-technology equipment, as most clinics have access to telephones and telephone ports, and many service users have a telephone or access to one. For these reasons, plus evidence suggesting that relatively few adolescents with OCD are able to access CBT[17] despite it being the recommended treatment,[18] TCBT was piloted for success and feasibility with adolescents with OCD in a London-based specialist clinic.[19] Results indicated that TCBT could successfully reduce symptoms of OCD and was regarded positively by service users.

The aim of the present study was to determine whether TCBT was as effective as face-to-face CBT for adolescents with OCD. As face-to-face CBT for OCD is a well-established treatment,[5] it is appropriate to use it as a benchmark against which to compare TCBT and to demonstrate noninferiority. It was hypothesized that:

- TCBT would not be inferior to traditional face-to-face CBT in reducing OCD symptoms as measured by the Children's Yale–Brown Obsessive-Compulsive Scale (CY-BOCS).
- TCBT would not be inferior on secondary outcome measures of depressive symptoms, self-report, and parent-report of adolescent OCD symptoms, overall psychological health, global functioning, and parental mental health symptoms.
- The changes observed at the end of the treatment period would be maintained over a 12-month follow-up period.

## METHOD

### Recruitment and Inclusion Criteria

Participants were recruited by referral from primary care general practitioners and from mental health professionals within secondary and tertiary care settings within the National Health Service (NHS) to a specialist OCD clinic between 2008 and 2011. Information about the study was conveyed by word of mouth, letters to referring agencies, advertisements published on Web pages of national OCD charities within the UK, and by a research support organisation within the NHS (the Mental Health Research Network). The study protocol was approved by the Joint South London and Maudsley/Institute of Psychiatry Research Ethics Committee (08/H0807/12). Written informed consent was obtained from all parents and participants more than 16 years of age, and informed assent from participants less than 16 years of age, after a detailed description of the study had been given. The trial was registered on the International Standard Randomized Controlled Trial Number Register (ISRCTN27070832).

Inclusion criteria were as follows: having primary OCD according to *DSM-IV* criteria; having a CY-BOCS score of 16 or greater, indicating moderate to severe impairment; being between the ages of 11 and 18 years; being medication-free or on a stable dose of medication for a period of 12 weeks or more; having no suicidal intent, drug or alcohol abuse, or psychotic symptoms; having no learning disability or pervasive developmental disability; needing and wanting CBT, and agreeable to randomisation; and being agreeable to parental involvement in treatment. Exclusion criteria were the following: current diagnosis of psychosis or current alcohol or substance abuse/dependence; English comprehension too poor to engage in treatment; severe disabling neurological disorder; diagnosed global learning disability or pervasive developmental delay; and characteristics interfering with completion of treatment within trial (e.g., a life-threatening or unstable medical illness).

### Measures

*Primary Outcome Measure.* The primary outcome measure was the clinician-administrated CY-BOCS,[20] which was administered by a blinded rater at all time points.

*Secondary Outcome Measures.* The Children's Obsessional Compulsive Inventory–Revised (ChOCI-R)[21] includes child- and parent-rated versions and is aimed at capturing subjective measures of OCD symptom severity and impairment.

The Beck Depression Inventory for Youth (BDI-Y)[22] assesses symptoms of depression in adolescents. Psychometric properties are sound.[23]

The Strengths and Difficulties Questionnaire (SDQ)[24] assesses child mental health symptoms more broadly. We used the total score to provide a measure of general psychological functioning from both a child-rated and parent-rated perspective.

Parental mental health was assessed using the total score of the 42-item version of the Depression, Anxiety