A Pilot Randomized Controlled Trial of Cognitive-Behavioral Therapy for Adolescents With Body Dysmorphic Disorder

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Objective: Body dysmorphic disorder (BDD) typically starts in adolescence, but evidence-based treatments are yet to be developed and formally evaluated in this age group. We designed an age-appropriate cognitive-behavioral therapy (CBT) protocol for adolescents with BDD and evaluated its acceptability and efficacy in a pilot randomized controlled trial.

Method: Thirty adolescents aged 12 to 18 years (mean = 16.0, SD = 1.7) with a primary diagnosis of BDD, together with their families, were randomly assigned to 14 sessions of CBT delivered over 4 months or a control condition of equivalent duration, consisting of written psychoeducation materials and weekly telephone monitoring. Blinded evaluators assessed participants at baseline, midtreatment, posttreatment, and at 2-month follow-up. The primary outcome measure was the Yale–Brown Obsessive-Compulsive Scale Modified for BDD, Adolescent Version (mean baseline score = 37.13, SD = 4.98, range = 24–43).

Results: The CBT group showed a significantly greater improvement than the control group, both at posttreatment (time × group interaction coefficient [95% CI] = −11.26 [−17.22 to −5.31]; $p = .000$) and at 2-month follow-up (time × group interaction coefficient [95% CI] = −9.62 [−15.74 to −3.51]; $p = .002$). Six participants (40%) in the CBT group and 1 participant (6.7%) in the control condition were classified as responders at both time points ($\chi^2 = 4.658$, $p = .031$). Improvements were also seen on secondary measures, including insight, depression, and quality of life at posttreatment. Both patients and their families deemed the treatment as highly acceptable.

Conclusion: Developmentally tailored CBT is a promising intervention for young people with BDD, although there is significant room for improvement. Further clinical trials incorporating lessons learned in this pilot study and comparing CBT and pharmacological therapies, as well as their combination, are warranted.

Clinical Trial Registration Information—Cognitive-Behaviour Therapy for Adolescents With Body Dysmorphic Disorder; http://www.isrctn.com/; ISRCTN67699666.

Key Words: Body dysmorphic disorder, children, adolescents, cognitive-behavioral therapy, randomized controlled trial

J Am Acad Child Adolesc Psychiatry 2015;54(11):895–904.

Body dysmorphic disorder (BDD) is a potentially severe psychiatric disorder characterized by excessive preoccupation with perceived defects or flaws in physical appearance that are not observable or appear only slight to others. This preoccupation leads to significant distress and impairment, time-consuming repetitive behaviors (e.g., grooming rituals, mirror checking, reassurance seeking), and marked avoidance (e.g., of social situations).[1] The disorder has an estimated prevalence of approximately 2% in community samples of adults[2-4] and is associated with high levels of occupational and social disability, including absenteeism, unemployment, marital dysfunction, and reduced quality of life.[5-7]

BDD has received little empirical attention in adolescents, which is surprising, given that an adolescent onset is reported in 70% of cases, with a mean age of onset around 16 years.[8] In young people, BDD results in major functional impairment, including social withdrawal, reduced academic performance, and dropping out of school.[9] Furthermore, the disorder is linked with strikingly high suicidality rates in adolescents, with a reported 21% to 44% of patients attempting suicide.[9-11] Unfortunately, the disorder often goes undetected in young people, as the symptoms of BDD may be mistakenly interpreted as normal developmental concerns (i.e., most teenagers worry about their appearance to some extent).

There is growing evidence that cognitive-behavioral therapy (CBT) may be efficacious for adults with BDD.[12-17] By contrast, the treatment literature for BDD in adolescents is very sparse; the only published evidence comes from single case studies[18-20] and a small case series of 6 adolescents.[21] The findings of these studies suggest that CBT is probably a feasible treatment option for adolescents with the disorder. Despite the lack of solid evidence, in the United Kingdom, clinical guidelines recommend CBT as a

Supplemental material cited in this article is available online.

first-line treatment for children and adolescents with BDD.[22] There is an urgent need to develop, evaluate, and disseminate age-appropriate treatment protocols for young people with BDD.

In this study, we aimed to develop an age-appropriate CBT protocol for young persons with BDD, involving their parents or carers/caregivers when appropriate, and to evaluate the acceptability and efficacy of this protocol in a pilot randomized controlled trial (RCT). We predicted that the intervention would lead to a significantly greater reduction in BDD symptoms compared to a control condition consisting of written psycho-education materials and weekly telephone monitoring, and that the therapeutic gains would be maintained 2 months after treatment. We also predicted that the intervention would be deemed acceptable and would result in high levels of satisfaction in both the young persons and their parents or carers.

METHOD

Study Design and Participants

The study was a single-blind RCT with 2 groups conducted at a single specialist center in England between February 2012 and August 2014. Patients were randomly allocated (1:1 ratio) to either 14 sessions of CBT delivered over a 4-month period or to a control condition of equivalent duration consisting of written psycho-education materials and weekly telephone monitoring (henceforth termed "control"). Participants randomized to the control condition were offered CBT after a 2-month follow-up. There were no changes to the trial design after its commencement or any protocol violations.

Participants recruited to the trial were those referred to the National and Specialist OCD [obsessive-compulsive disorder], BDD, and Related Disorders Clinic for Young People at the Maudsley Hospital. In addition to the usual referral channels, the trial was widely advertised across child and adolescent mental health services (CAMHS) using a range of methods, including specifically designed leaflets/posters, talks, and distributing brief screening questionnaires within community CAMHS. In addition, advertisements were placed on social media sites, relevant charities' Web sites, and magazines for young people. A Web site was also created to advertise the study. Individuals showing interest in the treatment trial were requested to see their local CAMHS or general practitioner to seek a formal referral to the clinic.

Eligibility criteria for participants were as follows: age range 12 to 18 years; a *DSM-IV* diagnosis of BDD; stable psychotropic medication for 12 weeks before randomization (if relevant); no plans to commence or increase the dose of psychotropic medication (if relevant); willingness to receive psychological treatment; willingness/ability to travel to the clinic for CBT; and a score of 24 or higher on the Yale–Brown Obsessive-Compulsive Scale Modified for BDD—Adolescent version (BDD-YBOCS-A).[23]

Exclusion criteria were as follows: current or past diagnosis of schizophrenia or bipolar affective disorder, current alcohol or substance dependence, severe disabling neurological disorder, global intellectual disability, autism spectrum disorder, or emerging borderline personality disorder requiring treatment in its own right; suicidal intent requiring hospitalization; English too poor to engage in treatment; and characteristics interfering with completion of treatment (e.g., selective mutism).

Interventions

CBT. Existing adult CBT protocols/treatment manuals for BDD[24,25] were adapted to ensure developmentally appropriate content for young persons with BDD. These adaptations were guided by the existing pediatric OCD[26] and BDD[20] literature, as well as by our own previous experience treating these patients.[21] For example, language was simplified, and age-appropriate worksheets and handouts were produced. In all cases, effort was made to include parents in psycho-education sessions at the start of treatment to ensure a shared understanding of BDD and to give parents the opportunity to learn how best to support the child in treatment. The extent to which parents/carers were included in subsequent sessions was decided in collaboration with the young person and guided by the individual case formulation, specifically considering the following factors: the level of parental involvement in BDD-related rituals, reassurance, and/or avoidance; the extent to which additional parental beliefs and/or behaviors were a barrier in treatment (e.g., high levels of parental criticism); and the extent to which parental involvement might inhibit disclosure or discussion of relevant experiences (e.g., shaming and humiliating experience within the family or within an intimate relationship).

The 14-session treatment protocol consisted of 3 main phases. Sessions 1 and 2 (90 minutes each) focused on psycho-education about the following: normal appearance worries versus BDD to explain why the diagnosis was made, in a way that would facilitate engagement with a psychological model; body image versus physical appearance, to demonstrate the role that perception might play in BDD; recognizing anxiety and its reduction over time, to provide a rationale for exposure and response prevention (ERP); developing an individualized cognitive behavioral formulation, to offer an alternative perspective on current difficulties; and goal setting and constructing an ERP hierarchy. Sessions 3 to 12 (60 minutes each) focused primarily on ERP as guided by the hierarchy. ERP tasks were conducted in sessions with therapist assistance (e.g., going to a café or a swimming pool while dropping safety behaviors) as well as set as homework tasks. Other optional modules (primarily mirror retraining and attention training)[24,25] were included as needed, determined by the individual formulation, to promote engagement with ERP (details in Supplement 1, available online). Sessions 13 and 14 (60 minutes each) included relapse prevention strategies and developing a plan for maintaining and building on treatment gains.

The treating therapists were clinical psychologists who were highly experienced in the delivery of CBT and with particular expertise in treating OCD and related disorders in children and adolescents. In addition, the therapists received ongoing monthly supervision during the trial from two senior therapists (M.A. and D.V.) with particular expertise in CBT for adults with BDD, and weekly supervision from more experienced peer therapists.

Control Condition. Participants randomized to the control condition were given written materials containing age-appropriate information about BDD, anxiety, and the link between thoughts, emotions, and behaviors (for details, see Supplement 1, available online). Importantly, these materials did not contain information regarding the treatment of BDD. Patients were able to e-mail or telephone the clinic with any questions that they might have about the materials and for general support. In addition, a research assistant telephoned each patient once a week to monitor mood and suicidal ideation/intent or other risks. During each call, the Patient Health Questionnaire (PHQ),[27,28] which contains a question about suicide intent, was completed. All participants assigned to the control condition were offered CBT after the end of the 2-month follow-up.