A Review of Psychotherapy for Obsessive-Compulsive Disorder

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ABSTRACT

Cognitive-behavioral therapy (CBT) is a first-line treatment for obsessive-compulsive disorder (OCD) in adults and children due to its efficacy, maintenance of therapeutic gains after treatment withdrawal, safety, and tolerability. The current article reviews research regarding the theoretical underpinnings of CBT, pragmatics regarding CBT implementation, and efficacy findings, while also highlighting barriers to efficacious treatment (ie, age, comorbidity, geography), methods of addressing such issues, and areas in need of further study.

INTRODUCTION

Obsessive-compulsive disorder (OCD) has a point-prevalence of approximately 1%-2% across children and adults and a lifetime prevalence of approximately 2%. Obsessive-compulsive disorder is characterized by the presence of distressing and difficult to control thoughts, impulses, or images that evoke considerable distress (obsessions). Individuals with OCD tend to engage in overt or covert behaviors aimed to reduce or neutralize distress (compulsions). Problematically, this cycle of compulsion engagement in response to obsessional triggers creates a negative reinforcement loop (ie, rituals reduce anxiety in the short-term), which maintains and/or exacerbates symptom severity.

The scope of impairment associated with OCD is unique from other anxiety disorders. Relative to those with other anxiety disorders, adults with OCD are more likely to report unemployment, sleep loss, interpersonal or relationship conflict, hospitalization, chronic personal distress, and impairment in activities of daily living. Children with OCD experience problematic family relations, considerable academic difficulties, and marked social dysfunction, which can further disrupt normative development. The extreme functional impairment that accompanies OCD is often directly due to the excessive time occupied by symptoms, nature of the obsessions, rituals and avoidance, and psychiatric comorbidity.

The available evidence suggests that cognitive-behavioral therapy (CBT) is among the most efficacious treatments for adult and childhood OCD. Serotonin reuptake inhibitors (SRI) have also demonstrated efficacy in the reduction of symptom severity in children and adults with OCD. A full review of efficacy and safety data pertaining to pharmacotherapy for OCD is beyond the scope of this review and thus, the reader is referred to comprehensive reviews on this topic.

Over the past several decades, a substantial literature has demonstrated the efficacy of CBT for adults and children with OCD. Response rates extend upward to 85% among adults and children alike, with approximately 40%-50% of patients achieving clinical remission. Treatment gains are generally stable, with effects being maintained over periods up to 7 years. Pooled effects suggest that CBT may have some advantage in efficacy over SRI treatment alone, leading to the suggestion that patients with OCD receive CBT alone or together with SRI therapy. The determination of which individuals receive CBT alone or concomitant with SRI medication is multifaceted and may be a function of illness severity, comorbidity, and ancillary features (eg, insight, anxiety sensitivity, etc.). To explain the nature, efficacy, and limitations of OCD treatment, we review the available research on psychotherapy for OCD, individual factors (ie, comorbidity, insight) that may attenuate treatment response, and alternative approaches that may aid in improving response and remission rates for OCD.

PSYCHOTHERAPY

Psychodynamic therapy

While there is some variance in theory, generally psychodynamic interpretations of OCD posit that obsessions and compulsions arise due to a conflict between an impulsive id and a rigid superego battling for control over the expression of unresolved fixations from the anal stage of development. Specifically, the id pushes for aggressive and sexual impulses to be fulfilled, while the rigid superego attempts to rid such
impulses from conscious awareness. To mediate this conflict, the ego develops defenses such as doubting, indecision, and magical thinking to mediate the struggle between id and superego. For example, contamination fears may relate to wishes to alleviate displaced feelings of shame, fears of one’s house being destroyed are representation of one’s destructive wishes, and obsessions of hurting one’s children may be a redirection of anger toward one’s spouse. There is no known empirical support for the efficacy of psychodynamic therapy for OCD—controlled-trials of psychodynamic therapy for OCD are nonexistent, and consequently a psychodynamic approach is not recommended for the treatment of OCD.

Cognitive-behavioral therapy (CBT)

CBT is an empirically supported psychosocial treatment premised on the theory that an individual experiences significant distress in the presence of a previously neutral thought or stimulus that has become classically conditioned to signal distress. The individual engages in compulsions to reduce obsessional distress. Exposure and response prevention (ERP) is a behavioral component of CBT that directs the individual to confront the aversive stimulus (ie, thought, item, situation), and experience the associated distress without engaging in rituals. Such distress will naturally habituate over time in the absence of ritual engagement.

Pragmatically, CBT for OCD is a multicomponential approach, conducted in a sequential manner. First, individuals are provided with psychoeducation regarding OCD, its behavioral, cognitive, and neurobiological underpinnings, and the treatment regimen. Obsessive-compulsive disorder may be described to patients as a “brain hiccup” or “odd wiring” that causes individuals to experience anxiety when certain thoughts or actions arise. It is then explained that engaging in compulsions triggered by obsessions reinforces this relationship by reducing distress, thereby increasing the likelihood of engaging in rituals whenever an anxiety inducing stimulus is encountered. Thus, treatment focuses on eliciting anxiety by presenting an obsessional trigger and prohibiting compulsions. By doing so, the obsessive-compulsive cycle is broken and eventually extinguished, as the individual learns the feared event does not occur if the compulsion is not performed, and in turn the aversive trigger no longer elicits distress at original levels. Second, a stimulus hierarchy is created to rank order the degree of distress the patient anticipates experiencing with being exposed to an obsessional trigger while refraining from ritual engagement. The exposure itself consists of having an individual confront the trigger—starting with less anxiety provoking stimuli first—without engaging in compulsions. The individual remains in the feared situation until anxiety habituation (ie, reduction in anxiety to a negligible level) occurs. A single exposure is typically repeated until it no longer elicits a significantly anxious response, or at least until the associated anxiety falls considerably below pre-exposure levels. Following successful completion of an exposure, progressively more difficult exposures are conducted in a gradual manner according to the individual’s hierarchy. Homework based on the session content is a critical component of treatment with patients typically being assigned up to 60 min or more of homework daily. Third, cognitive strategies are developed to highlight and confront irrational and dysfunctional thoughts. As previously mentioned, individuals with OCD tend to overestimate the likelihood of feared events occurring, as well as overestimating their individual responsibility in such an occurrence. Cognitive strategies focus on helping the patient identify and correct anxiogenic cognitions that are conceptually related to obsessive-compulsive symptoms. By doing so, individuals further cultivate nonattachment to OCD-related thoughts and come to rely on more realistic perceptions of stimuli. In addition, strategies that enhance constructive self-talk (ie, “this is hard but I can do it”) may enhance motivation and engagement in treatment procedures. Finally, relapse prevention training is a critical component of CBT with an emphasis of teaching the patient skills to maintain gains and deal with any reemergence of symptoms.

Although CBT has demonstrated efficacy, attrition rates during treatment are problematic, ranging from 3% to 39%. and as many as 25% of patients refuse to participate in psychosocial treatment. Attrition may be related to a series of factors including lack of motivation or insight, low tolerance for discomfort related to treatment strategies, severe symptom presentation, or comorbid psychopathology that interferes with treatment seeking behavior (eg, avoidant personality disorder, severe major depression). For those with OCD of mild to moderate severity, practice guidelines recommend initiating treatment with CBT alone. If an adequate response is not achieved, multimodal treatment may be appropriate. Similarly, for those with severe OCD symptoms, pharmacotherapy either in conjunction or sequentially provided before CBT initiation is most appropriate. Through sequential pharmacological intervention, it may be possible to reduce baseline anxiety levels or to mitigate symptoms of comorbid disorders (eg, depression), reducing rates of attrition and fostering improved treatment outcome.

CBT outcome data in adults with OCD

CBT has been rigorously studied as a treatment for adult OCD. Studies have varied some in terms of number of sessions provided, session format (group vs individual, intensive vs weekly), reliance on cognitive restructuring, and in combination with pharmacotherapy. A review of 12 CBT outcome studies for adults with OCD revealed that 87% of adults had a clinically meaningful response, and were able to maintain gains at extended follow-up durations. Effect sizes of CBT for adult OCD are robust (d = 1.30–1.86), compared to SRIs (d = 0.95–1.63) or a placebo (d = 0.20–0.59). Perhaps best illustrating this, Foa and colleagues examined the relative efficacy of CBT, clomipramine, and combined therapy over 12 weeks of intervention in OCD symptom reduction. Overall, CBT was as efficacious as CBT with concurrent clomipramine, and both treatments were significantly more effective than clomipramine mono-therapy or a placebo (clomipramine was superior to placebo).
CBT OUTCOME DATA IN CHILDREN AND ADOLESCENTS WITH OCD

Similar to adults, CBT demonstrates strong efficacy in children and adolescents with OCD (Cohen’s d = 1.45–1.98). In addition, CBT has demonstrated superior efficacy to other modes of treatment such as relaxation training. Enhanced treatment effects have been noted when the families of youth with OCD have been incorporated in psychotherapy. Empirical trials of family-based CBT for pediatric OCD have demonstrated robust effects over relaxation training (Cohen’s d = 0.85) and waitlist control (Cohen’s d = 2.45). It has been examined in group and individual family formats, with significant remission rates and maintenance of gains in both groups at an 18-month follow-up. Storch et al. compared intensive (daily for 3 weeks) and weekly (once per week) family therapy for children with OCD finding that 75% of intensive participants and 50% of weekly participants achieved remission at posttreatment (within group Cohen’s d = 2.62 and 1.73); findings were maintained at 3-month follow-up. Incorporating families into treatment may prove as one strategy of personalizing the intervention to dually address OCD and comorbid conditions.

Integrating the family of a child with OCD in treatment can help to target numerous factors maintaining a child's symptoms. First, children may not have sufficient insight into the irrationality of obsessional thoughts and compulsions. Poor insight has been associated with diminished CBT response in children and adolescents and medication response among adults. As children spend a significant amount of time around their family, family members are able to provide opportunities and contingencies to enhance a child’s motivation to confront obsessive triggers and subsequently resist compulsions. Second, children may not be capable of the self-regulation necessary to fully engage in treatment. Thus, parents not only provide support for their children undergoing treatment, but also facilitate awareness and use of intervention strategies in naturalistic settings. Third, family members may unintentionally contribute to OCD symptom severity through accommodation. Although family members may help a child avoid feared stimuli, assist with symptoms, or provide reassurance to reduce the child’s distress and family conflict such behaviors tend to contribute to overall pathology and worse CBT outcome. Thus, family accommodation of symptoms is a direct target in family-based CBT. Finally, the pattern of comorbidity may vary in youth with OCD relative to adults with increased rates of disruptive and inattentive behavior in the former.

TREATMENT CONSIDERATIONS

CBT for patients with comorbidity

As many as 75% of adults with OCD have at least one comorbid condition, with generalized anxiety disorder, major depressive disorder, social phobia, and panic disorder among the most prevalent. Although some data suggests that certain comorbidities such as major depressive disorder, generalized anxiety disorder, and post-traumatic stress disorder, attenuate CBT response in adults, results remain mixed. Inconsistency in findings may reflect the type and severity of comorbid conditions in clinical trials (ie, exclusion of individuals with schizophrenia, autism, bipolar disorder, substance abuse, or severe forms of depression).

Similar to adults, comorbidity in pediatric OCD samples is common with about 75% of youth exhibiting a comorbid disorder. The number of comorbid conditions has been associated with attenuated CBT and pharmacotherapy response and higher relapse rates. Among specific disorders, major depressive disorder has been linked to worse CBT response among adults and children, while comorbid disruptive behavior has been linked to lower response and remission rates in children. The presence of comorbid disruptive behavior is thought to attenuate treatment response as there is typically greater family accommodation, externalizing problems, and decreased resistance to OCD symptoms when compared to other comorbid or no comorbid conditions.

MOTIVATIONAL FACTORS

Despite its efficacy, engaging in exposures is either too overwhelming for a small group of patients or may not result in complete symptom resolution. As a result, research has begun to modify psychotherapy to enhance motivation to engage in exposures or alternatively strengthen cognitive components of treatment. Motivational interviewing (MI) is a strategy that helps to prepare an individual for change and also increasing feelings of self-efficacy in making the desired change. Preliminary research has suggested that the inclusion of an MI course prior to CBT for OCD enhanced treatment response in children and treatment adherence in adults. Cognitive therapy (CT) may also be appropriate. Cognitive therapy directs individuals to confront the irrational, obsessional thoughts (ie, contamination, illness, misfortune, catastrophe, etc.) with logical reasoning. Individuals are encouraged to focus on the statistical likelihood of the feared outcomes actually occurring, or times in the past when s/he was unable to engage in a ritual and the feared outcome did not occur. Cognitive therapy has shown promising initial results in adults, but likely is not superior to exposure-based CBT in terms of overall response. The efficacy of CT may also be attenuated in individuals who engage in cognitive rituals such as counting, self-reassurance, or other mental rituals. Further, clinicians must be cognizant of patients who engage in CT exercises to reduce OCD-induced anxiety such that CT exercises function as rituals (ie, ritual replacement). Consequently, CT in the absence of ERP is rarely indicated. Instead, concurrent administration of an SRI during a course of psychotherapy may be indicated to enhance motivation to engage in exposures and improve treatment outcomes.
OVERCOMING TREATMENT BARRIERS: DISSEMINATION OF EVIDENCED-BASED PSYCHOTHERAPY

Unfortunately, many children and adults with OCD may not have comparable access to evidence-based psychotherapy as they do pharmacotherapy, as the number of therapists trained in CBT for OCD is fairly limited. Geographic, and relatedly financial factors, contribute additional barriers to accessing CBT. As such, the field has begun to examine ways in which treatment tailored to OCD can be more widely disseminated such as intensive therapy, manualized protocols, bibliotherapy, computer-guided therapy, and self-directed therapy.

Intensive treatment

Intensive CBT is appropriate for those who do not have access to qualified CBT therapists, children who may lack motivation to engage in treatment, and those with severe illness presentation. Sessions are conducted over 3–5 weeks (instead of 12 weeks), are held daily, may be longer (ie, 90 minutes or longer), or in some combination of these. A number of studies demonstrate the efficacy of this treatment modality for children and adults.

Alternative delivery modalities

CBT is flexible in terms of the context in which it occurs. Its effects may be most robust if treatment occurs in the context in which the symptoms are triggered. Results from controlled trials, however, revealed no significant differences in outcomes when treatment was administered at home or in a more formal office environment. Storch et al. are currently examining the efficacy of CBT administered via webcam in children and adolescents. Sessions follow the Pediatric OCD Treatment Study (POTS) model, in which sessions were held twice a week for 2 weeks, then weekly over the course of 10 weeks. Although there may be limitations in the types of exposures that can be conducted via webcam, a significant strength of this approach is that children can generalize the techniques typically used in an office to their home environment more easily and naturally and that homebound patients can receive services. As well, many clinicians cannot make home visits despite their utility; this may be one manner of circumventing this issue. Additionally, Internet-based CBT can reduce geographic barriers to accessing evidence-based intervention.

Manualized treatments

Manualized treatments offer another mechanism by which to mitigate barriers to accessing treatment. Van Oppen et al. conducted a randomized controlled trial of CBT administered by a trained licensed clinician, a master’s level graduate student using manualized treatment, or a self-directed manualized treatment in adults. Under the self-guided treatment, participants followed the treatment protocol delineated by the manual, but were able to control the order and types of exposures they conducted. All treatment arms consisted of 12 sessions, with the first 2 dedicated to constructing the fear hierarchy. Therapist-guided sessions were conducted in the environment in which they typically occur (eg, at home, public restrooms, etc.), focused on exposures, and were approximately 90 minutes in length. Self-guided sessions were conducted in an outpatient clinic, did not entail an exposure, but instead focused on creating exposures for the individual to practice outside the session and lasted 30 minutes. On average, participants, irrespective of condition, experienced significant improvements in OCD symptom severity. Although there were no statistically significant differences in outcome, it appears that the therapist-guided treatments had a larger treatment effect than self-guided treatments. These results suggest that therapeutic techniques can be disseminated effectively to less experienced therapists, thereby enhancing treatment access.

Self-guided therapy

Bibliotherapy, the use of self-help manuals with minimal clinician contact, and computer-guided CBT have demonstrated relative efficacy in the treatment of OCD. Tolin et al. compared the efficacy of self-guided therapy and clinician-guided therapy for the treatment of adults with OCD. Results support the enhanced benefit of clinician-guided treatment. Not surprisingly, although bibliotherapy or self-guided therapy are associated with modest reductions in OCD symptom severity, clinician-guided treatment remains the most effective and preferred mode of treatment for adults with OCD.

Considerations for children

The issue of limited CBT dissemination is particularly problematic for children with OCD, given the childhood onset for most affected individuals and that childhood is a developmentally critical period with marked consequences if gone astray. As well, despite the efficacy of SRI therapies, practice parameters suggest initiating treatment with CBT alone for mild and moderate cases, and CBT and SRI therapy concurrently for more severe cases. Off-label use of atypical antipsychotics is taking place with considerable frequency in the absence of efficacy data and with a relatively high risk profile for this medication class. Indeed, youth taking an atypical antipsychotic had an average weight increase of 8.5 kg over a 10-week period, necessitating that lower-risk alternatives should be considered prior to prescription of such medications in children.

In a recent National Institutes of Health (NIH)-funded study examining the additive effects of CBT to ongoing SRI treatment in children, three treatment arms were compared: CBT provided by highly trained psychologists in conjunction with SRI treatment; a less intensive version of CBT (conducted by the prescribing psychiatrist) that focused on encouraging CBT skills rather than guiding the individual through CBT in conjunction with SRI medication management; and continued SRI treatment alone. Although study
results have yet to be published, the design may hold prospects for the dissemination of CBT strategies through psychiatrists, which may be more accessible to children than psychologists trained in CBT for OCD.

**FUTURE DIRECTIONS**

**Tailored treatment**

Despite its efficacy, only 25%-40% of individuals reach full recovery with CBT and many treatment responders remain somewhat symptomatic. This review has addressed several of the reasons for this (eg, comorbidity, insight, access to trained professionals, etc.). To date, however, treatments have been developed for the “average” patient with limited attention to the considerable symptom heterogeneity associated with OCD that might impact treatment course. Individualized treatment approaches that are responsive to individual patient characteristics will improve clinical outcome and treatment efficiency.

Tailoring the intervention to dually address OCD and the comorbid condition holds merit for maximizing treatment outcome and is consistent with the increased emphasis on individualized patient care. For example, individuals with comorbid depression for whom behavioral activation is an obstacle in OCD treatment (eg, unable to be motivated to engage in exposures) may benefit from a trial of an SRI prior to CBT implementation. Similarly, for those whose comorbid anxiety interferes with adherence, CBT protocols may benefit from sequential pharmacotherapy. As impulsivity and inattention may limit an individual’s ability to refrain from ritual engagement, individuals with ADHD may benefit from concurrent pharmacotherapy. Future research is needed, however, to examine a wider array of comorbidities (eg, bipolar disorder, schizophrenia spectrum disorders, substance abuse) across a range of severity to examine the impact of comorbidity on OCD treatment-response to better tailor treatments and enhance response.

**D-cycloserine**

A potentially significant translational success derived from animal research has shown that the N-methyl-D-aspartate (NMDA) receptor is critically involved in fear extinction, and that the NMDA partial agonist D-cycloserine (DCS) enhances extinction of learned fear. Given that extinction of conditioned fear is central to CBT, DCS augmentation of exposure therapy has been tested in several adult anxiety disorders. Studies that have examined the efficacy of DCS in CBT for OCD in adults have also been encouraging as individuals administered DCS experienced more rapid and enduring treatment gains compared to those given a placebo. D-cycloserine has been suggested to make engaging in exposures more palatable, as quicker successes and learning increases confidence and motivation to engage in a wider variety of exposures, which in turn increases generalization to other stimuli and may lead to better treatment outcomes. This effect may be particularly useful for children, who may have difficulty buying into ERP tasks. Storch et al recently compared the efficacy of DCS to placebo in children undergoing weekly CBT for OCD. Relative to the placebo augmentation arm, DCS augmentation was associated with reduced OCD symptom severity at posttreatment with effect sizes in the moderate range. Future work investigating DCS as an augmenting medication in CBT for OCD should examine its impact on participant attrition and durability of treatment gains.

**CONCLUSION**

Psychotherapy, namely CBT that heavily relies on ERP, is a highly effective intervention for OCD. Indeed, current practice parameters for OCD in adults and children recommend it as the first-line intervention in those with mild and moderate symptoms and together with SRI therapy in those with severe symptomatology or clinical characteristics that may complicate illness course (eg, comorbid depression, poor insight). The safety and tolerability of CBT tend to be excellent as are the durability of gains. Yet, CBT is not without its limitations. Limited access to trained clinicians, financial barriers, time, and the ability of the patient to tolerate exposures, however, all interfere with accessing treatment. Research has partially addressed these issues by: (1) developing various therapies that minimize these issues (eg, intensive treatment programs, manualized treatments, web-based ERP), (2) attempting to enhance CBT effects with pharmacological augmentation (eg, DCS), and (3) devising treatments tailored to address psychiatric comorbidity. These advances have afforded clinicians new tools to address the many complexities of OCD and enhance the availability of empirically supported treatment.

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