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Utilizing DBT Skills to Augment Traditional CBT for Trichotillomania: An Adult Case Study

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Traditional cognitive-behavioral interventions for trichotillomania have had modest acute treatment outcomes and poor maintenance of gains over time. Techniques adopted from dialectical behavior therapy (DBT) can potentially enhance treatment outcomes by specifically addressing issues of impulsivity, emotion regulation, and distress tolerance. In this paper we discuss the application of a DBT-enhanced treatment and its outcome in a single-case study.

A RECENT meta-analysis of treatment outcome data (Bloch et al., 2007) and a survey of the current practices of trichotillomania (TTM) practitioners (Flessner, Penzel, Trichotillomania Learning Center Scientific Advisory Board [TLC-SAB], & Keuthen, 2010) both support cognitive-behavioral treatment (CBT) as the first-line intervention for TTM. Despite this, CBT outcomes for this disorder have been modest and somewhat disappointing. While traditional CBT does reduce hair-pulling severity in some sufferers acutely, few hair pullers achieve complete abstinence and treatment gains generally erode over time (Keijsers et al., 2006; Lerner, Franklin, Meadows, Hembree, & Foa, 1998). Only one study augmenting traditional CBT with acceptance and commitment therapy techniques has documented maintenance of treatment improvement at 3-month follow-up with rigorous assessment measures (Woods, Wetterneck, & Flessner, 2006).

Recent research, especially studies highlighting the role of emotion regulation in TTM and the existence of different TTM behavioral styles, led us to augment traditional CBT interventions with DBT skills (Linehan, 1993a, 1993b). In this paper we will review the background literature supporting our augmented treatment approach and discuss the course and outcome of our novel treatment for one adult hair puller.

[1] Video patients/clients are portrayed by actors.

Keywords: trichotillomania; hairpulling; dialectical behavior therapy; habit reversal training

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Emotion Regulation and TTM

Considerable evidence exists to suggest that affect regulation may be an important function of hair pulling behavior. The *DSM-IV-TR* criteria for TTM (American Psychiatric Association [APA], 2000) include tension prior to pulling or when attempting to resist pulling (Criteria B), as well as pleasure, relief, or gratification upon pulling (Criteria C). In addition, other affective states, including anger, anxiety, embarrassment, boredom, frustration, and depression, have also been identified as cues, reinforcers, and maintaining variables for TTM (Christenson, Ristvedt, & Mackenzie, 1993; Hajcak, Franklin, Simons, & Keuthen, 2006; Mansueto, Stemberger, Thomas, & Golomb, 1997).

In a study of nonclinical hair pullers, Stanley, Borden, Mouton, and Breckenridge (1995) documented pre- to postpulling reductions in tension, boredom, sadness, and anger. Diefenbach, Mouton-Odum, and Stanley (2002) also reported significant decreases in boredom, anxiety, and tension that occurred secondary to pulling, as well as significant increases in relief, guilt, sadness, and anger in a clinical TTM cohort. Furthermore, in a study comparing pullers and normal controls, significant group differences in self-reported emotional experiences secondary to hair pulling were reported with greater affective changes upon pulling in those with TTM (Diefenbach, Tolin, Meunier, & Worhunsky, 2008). Lastly, pediatric pullers also indicated pleasure secondary to pulling in a recent study (Meunier, Tolin, & Franklin, 2009), indicating that a positive reinforcement mechanism may be implicated in TTM maintenance in this age group.

More recently, the potential role of affective regulation in TTM was clinically explored by Shusterman, Feld, Baer, and Keuthen (2009) in a large-scale Internet survey of self-identified hair pullers. These investigators found a

small-to-moderate correlation between problematic hair pulling and affective regulation as well as predicted relationships between affective pulling triggers, problematic emotion regulation, and pulling severity. From a neurobiological perspective, recent imaging studies have also identified abnormalities in brain regions implicated in emotional learning and affective regulation. In a structural MRI study, Chamberlain and colleagues (2008) found increased grey matter density in the left amygdalo-hippocampal formation, an area of the limbic system involved in arousal and emotional learning. In a separate diffusion tensor imaging study investigating the integrity of cortical white matter tracts in individuals with TTM, abnormalities were reported in the temporal cortex, an area implicated in affective regulation (Chamberlain et al., 2010).

TTM Pulling Styles

One hypothesis for the limited acute and poor follow-up results with traditional HRT is the failure of these techniques to adequately address the heterogeneity of hair pulling phenomenology. Many years ago Christenson, Mackenzie, and Mitchell (1991) proposed two types of hair pulling: (a) "automatic" or habitlike pulling out of awareness and (b) "focused" pulling often secondary to uncomfortable inner experiences. In a subsequent analysis of cue profiles, these authors provided further corroborative evidence for two TTM components characterized by negative affect with awareness of pulling or sedentary activities with "contemplative attitudes" (Christenson et al., 1993). More recent research has extended our knowledge by highlighting differences in TTM phenomenology and severity, comorbid affective symptoms and repetitive behaviors with the predominance of different pulling styles (Flessner, Conelea, et al., 2008; Flessner, Woods, Franklin, Cashin, et al., 2008; Flessner, Woods, Franklin, Keuthen, & Piacentini, 2009). It has been conjectured that traditional CBT is more effective with "automatic" versus "focused" hair pulling (Flessner, Conelea, et al., 2008), though empirical support for this is lacking.

DBT-Enhanced CBT Protocol for TTM

Recognizing these recent advances in our understanding of TTM phenomenology, we sought to amplify existing CBT approaches by including instruction in skills to further enhance awareness and address problematic emotion regulation and distress tolerance. Our treatment protocol (Keuthen et al., 2010) consists of 11 weekly hour-long sessions with elements of both traditional CBT (habit reversal training and stimulus control) and DBT assessed to be relevant to the treatment of TTM. We chose DBT strategies to enhance traditional CBT approaches given its proven track record in addressing emotion regulation deficits and impulsivity coupled with its explicit instruction in specific skill sets in a concrete, sequential training format. DBT has documented efficacy in treating a range of psychiatric conditions, including borderline personality disorder (Linehan et al., 2006), binge-eating disorder (Telch, Agras, & Linehan, 2001), opioid dependence (Linehan et al., 2002) and treatment-resistant depression (Harley, Sprich, Safren, Jacobo, & Fava, 2008).

Our acute treatment session protocol includes psychoeducation and motivational interviewing (Session 1), competing response and stimulus control training (Session 2), mindfulness training (Sessions 3–5), emotion regulation training (Sessions 6–8), distress tolerance training (Sessions 9–10), and relapse prevention techniques (Session 11). Subsequent maintenance treatment (Sessions 12–15) is dedicated to review of skills practice and troubleshooting problematic hair-pulling scenarios. Therapist contact is tapered with two maintenance sessions every other week and the final two sessions every 4 weeks. All protocol skills are initially introduced conceptually and then applied more specifically to address the challenges of coping with TTM.

We recently conducted an open pilot trial of our DBT-enhanced CBT approach for TTM (Keuthen et al., 2010; Keuthen et al., 2011). Significant reduction in hair-pulling severity occurred at posttreatment and at 3-month maintenance. Changes in hair-pulling severity and emotion regulation capacity were correlated at both time points. At 3- and 6-months follow-up, significant improvement from baseline was again reported on all measures of hair pulling severity and emotion regulation, as well as significant correlations between changes in hair pulling severity and emotion regulation. In addition, we are currently conducting a randomized controlled trial comparing our DBT-enhanced CBT approach with a minimal attention control in a larger sample of hair pullers.

Below we will present a case study highlighting the implementation of our amplified protocol in treating an adult female hair puller (all identifying variables have been altered to protect the identity of the individual).

Case Study

Jenny B. is a 46-year-old married female who is employed full-time as a marketing executive for a national pharmaceutical company. She met *DSM-IV-TR* criteria for TTM with a history of pulling since the age of 11 years old. Her pulling caused significant distress due to limitations in leisure activities (especially camping and swimming) and time spent engaged in the behavior. She sought treatment due to her fear that the pulling behavior would cause physical damage to her eyes. She had recently