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Impact of dialectical behavior therapy versus community treatment by experts on emotional experience, expression, and acceptance in borderline personality disorder

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ABSTRACT

Evidence suggests that heightened negative affectivity is a prominent feature of Borderline Personality Disorder (BPD) that often leads to maladaptive behaviors. Nevertheless, there is little research examining treatment effects on the experience and expression of specific negative emotions. Dialectical Behavior Therapy (DBT) is an effective treatment for BPD, hypothesized to reduce negative affectivity (Linehan, 1993a). The present study analyzes secondary data from a randomized controlled trial with the aim to assess the unique effectiveness of DBT when compared to Community Treatment by Experts (CTBE) in changing the experience, expression, and acceptance of negative emotions. Suicidal and/or self-injuring women with BPD ($n = 101$) were randomly assigned to DBT or CTBE for one year of treatment and one year of follow-up. Several indices of emotional experience and expression were assessed. Results indicate that DBT decreased experiential avoidance and expressed anger significantly more than CTBE. No differences between DBT and CTBE were found in improving guilt, shame, anxiety, or anger suppression, trait, and control. These results suggest that DBT has unique effects on improving the expression of anger and experiential avoidance, whereas changes in the experience of specific negative emotions may be accounted for by general factors associated with expert therapy. Implications of the findings are discussed.

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Borderline personality disorder (BPD) is a severe psychological disorder, marked by a pervasive pattern of instability in interpersonal relationships, self-image, affect, and behavior (American Psychiatric Association, 2013). The severity of the disorder is indicated by its chronicity (Widiger & Weissman, 1991), comorbidity (Lieb, Zanarini, Linehan, & Bohus, 2004), lethality (Linehan, Rizvi, Shaw-Welch, & Page, 2000), high treatment utilization (Bender et al., 2001), and poor treatment outcomes (Gunderson et al., 1989; Rizvi, 2011). People diagnosed with BPD frequently engage in various types of impulsive and self-damaging behaviors, such as suicide attempts, self-harm, or substance abuse (Lieb et al., 2004; Soloff, Lis, Kelly, Cornelius, & Ulrich, 1994). These behaviors often function as maladaptive strategies used to achieve short-term relief from intense negative emotions (Brown, Comtois, & Linehan, 2002; Chapman, Gratz, & Brown, 2006; Linehan, 1993a). Indeed, the biosocial theory hypothesizes that people with a BPD diagnosis have a biologically based emotional vulnerability characterized by high emotional sensitivity and reactivity and a slow return to baseline (Crowell, Beauchaine, & Linehan, 2009; Linehan, 1993a).

Research has offered partial support for this theory. A review of the literature on BPD and emotional distress found that people diagnosed with BPD consistently report having more intense emotions, having greater reactivity to emotionally evocative stimuli, and experiencing greater affective instability than controls. Findings were nevertheless mixed when behavioral and psychophysiological indices of emotional responding (as opposed to self report) were used. Some indices of emotional distress (e.g., heart rate) did offer support for greater emotional reactivity and a propensity towards experiencing more negative affect, while other indices (i.e., skin conductance response) refuted this hypothesis (Rosenthal et al., 2008).

Follow up studies continue to bring support in favor of heightened negative affectivity in BPD, while offering a mixed picture with regards to reactivity. Newer evidence suggests that people

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with a BPD diagnosis indeed report experiencing high levels of baseline negative emotion relative to controls although heightened reactivity in the presence of emotional stimuli was not found (Kuo & Linehan, 2009). In an electrophysiological study, people with a BPD diagnosis evidenced enhanced cortical reactivity to unpleasant emotional stimuli when compared to a control group (Marissen, Meuleman, & Franken, 2010). Furthermore, when compared to non-clinical controls and matched schizotypal personality disorder controls, adults diagnosed with BPD showed greater activation in the amygdala (an area related to emotional reactivity) when being shown emotional but not neutral pictures (Hazlett et al., 2012). In addition, the activation in the amygdala took longer to return to baseline in the BPD group (Hazlett et al., 2012). Thus, while additional research is needed to better understand the mixed findings on emotional reactivity, heightened experience of aversive emotions is clearly a common feature in BPD and thus should be an important target in BPD treatments.

Difficulties with heightened negative affect do not pertain to a single emotion. Experiencing intense anger and difficulty controlling anger expression are part of the diagnostic criteria for BPD (American Psychiatric Association, 2013) and exaggerated anger responses are commonly reported among adults with a BPD diagnosis (Clarkin, Widiger, Frances, Hurt, & Gilmore, 1983; Gardner, Libenluft, O'Leary, & Cowdry, 1991; Koenigsberg et al., 2002). In addition, up to 95% of BPD outpatients report comorbid emotional disorders (i.e., mood and anxiety disorders; Harned et al., 2008). Furthermore, shame is a common and persistent emotion in BPD (Gratz, Rosenthal, Tull, Lejuez, & Gunderson, 2010; Rizvi, Brown, Bohus, & Linehan, 2011), and heightened levels of guilt have also been associated with BPD (Rüsch et al., 2007).

Experiential avoidance, including avoidance of experiencing emotions, also appears to be particularly problematic for people diagnosed with BPD. For example, BPD participants report more avoidance-oriented response patterns in coping inventories than non-BPD counterparts (e.g., Bijttebier & Vertommen, 1999) and score higher on a measure of experiential avoidance than do non-clinical controls or anxious participants (Rüsch et al., 2006). Furthermore, chronic suppression of negative thoughts was shown to mediate the relationship between borderline personality features and negative affect (Rosenthal, Cheavens, Lejuez, & Lynch, 2005).

Heightened negative affectivity and problematic emotional expression are not only distressing to people diagnosed with BPD, but also lead to behavioral dyscontrol. Shame has been found to predict recurrence of self-injurious behavior in women diagnosed with BPD (Brown et al., 2002). Comorbid anxiety disorders (Pagura et al., 2010; Sareen, 2011) and heightened aggression (Evren, Cınar, Evren, & Celik, 2011) increase the odds for suicidal behavior in a variety of clinical presentations, including BPD. In medical settings, when compared to non-BPD controls, BPD patients display more disruptive behaviors that are indicative of dysregulated anger (yelling, screaming, threatening, etc; Sansone, Farukhi, & Wiederman, 2011). We found no studies assessing the relationship between guilt and behavioral dyscontrol in BPD, nevertheless in general samples guilt has been linked to reduced self-control (Hofmann & Fisher, 2012).

Efforts to suppress and avoid painful private experiences (i.e., experiential avoidance) may actually be a key variable that explains the link between negative affect and the self-destructive behaviors seen in BPD. Experiential avoidance exacerbates negative affect in the long-term (Campbell-Sills, Barlow, Brown, & Hofmann, 2006; Cioffi & Holloway, 1993; Marx & Sloan, 2002), leads to reliance on maladaptive strategies for reducing emotional intensity (Kashdan, Barrios, Forsyth, & Steger, 2006) including self-harming behaviors (Chapman et al., 2006), and makes progress in treatment more difficult (Berking, Neacsiu, Comtois, & Linehan, 2009).

Therefore, changing experiential avoidance and attempting to reduce maladaptive experience and expression of anger, anxiety, shame, and potentially guilt should be key targets in treating people diagnosed with BPD as they could improve the internal experience of BPD clients thus contributing to reduced behavioral dyscontrol. While reducing the intensity of negative affect may be a difficult target because of its biological basis, changing how BPD patients respond to these emotions both in terms of acceptance and expression is a promising target for psychological treatments.

Dialectical Behavior Therapy (DBT; Linehan, 1993a, 1993b), is a cognitive behavioral treatment for BPD with substantial empirical support (Kliem, Kroger, & Kosfelder, 2010; Leichsenring, Leibing, Kruse, New, & Leweke, 2011). DBT is an emotion-focused treatment that is designed to improve emotional experience and expression and reduce experiential avoidance in people diagnosed with BPD. DBT includes a dialectical balance of accepting vs. changing problematic emotions as a way to directly target emotional distress. This is accomplished through teaching clients how to decrease emotional vulnerability, regulate and change emotions, and accept and allow emotions to be experienced more fully. Teaching on emotions and emotion regulation is done directly through didactic presentation of skills and indirectly through formulating problems as emotion-related, attending to the client's in-session emotions, and modeling emotional awareness, acceptance and regulation (Linehan, 1993a). An important question that still needs to be addressed more fully is whether this focus within DBT on emotion indeed results in improved emotional experience, expression, and acceptance in BPD clients.

Research has consistently shown that DBT is effective in reducing anger, with some studies finding that it is superior to treatment as usual (TAU; Evershed et al., 2003; Koons et al., 2001, 2006; Linehan, Heard, & Armstrong, 1993; Shelton, Kesten, Zhang, & Trestman, 2011; Soler et al., 2009), with a few exceptions (Bohus et al., 2004; Linehan et al., 1999), but performs similar to other treatments specifically designed for BPD (Clarkin, Levy, Lenzenweger, & Kernberg, 2007; McMain et al., 2009), with one exception (Turner, 2000).

Likewise, evidence suggests that DBT is generally effective in reducing anxiety, although findings supporting that DBT outperforms other treatments are mixed. Some studies (Bohus et al., 2004) but not others (Koons et al., 2006; Turner, 2000) indicate that DBT is superior to TAU in reducing anxiety among people with a BPD diagnosis or with severe mental illness. When compared to an active control, DBT has been found equally effective to CTBE (Harned et al., 2008) in leading to diagnostic remission from anxiety disorders, and more effective in anxiety reduction than a supportive therapy group (Soler et al., 2009). To our knowledge, no study of DBT has included shame or guilt as an outcome, nor has any study examined the differential effect of DBT on experiential avoidance.

The present study is part of a larger program of research comparing DBT with a rigorous control condition (community treatment by experts, or CTBE) designed to control for potential threats to internal validity (e.g., expertise, allegiance). Findings from the main outcome study indicate that DBT has unique effects that extend beyond those of non-behavioral expert therapy in reducing suicide attempts, medical severity of suicidal and self harming acts, use of crisis services, inpatient hospitalizations, and treatment drop-out (Linehan et al., 2006). Using data from the Linehan et al. (2006) study, the present study examines secondary outcomes related to the experience and expression of negative emotions, including experiential avoidance, anger expression, and the specific emotions of anger, anxiety, shame, and guilt among suicidal and/or self-injuring women diagnosed with BPD. We examined two hypotheses: 1) the experience, expression, and