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Baseline eating disorder severity predicts response to an acceptance and commitment therapy-based group treatment

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ABSTRACT

The present study investigated whether more severe baseline eating pathology (e.g. baseline symptomatology, previous hospitalizations, and low weight in anorexia nervosa) moderated the effect of an Acceptance and Commitment Therapy (ACT)-based group treatment. Participants were 140 women who were admitted to an inpatient facility for eating disorders. Women were categorized as anorexia nervosa spectrum or bulimia nervosa spectrum at intake and completed measures of eating pathology. All participants received comprehensive treatment, and those in the treatment-as-usual plus ACT condition received twice weekly ACT group treatment. At post-treatment (i.e., at discharge from the facility), participants completed measures again. Severity of self-reported eating symptomatology moderated treatment such that those with more severe symptoms at baseline showed greater improvements in eating disorder symptomatology in the ACT condition than in the treatment-as-usual condition. Additionally, trends showed similar patterns for those with more previous hospitalizations and those on the anorexia nervosa spectrum who had lower body weights. The magnitude of differences was modest, but indicates that an acceptance-based treatment may be a beneficial for patients with more severe eating disorder pathology.

1. Introduction

Eating disorders, particularly among adult patients with a long course of illness, are exceptionally difficult to treat. Patients presenting for admission to inpatient treatment centers frequently have a long course of illness, are more symptomatic (compared to patients presenting for outpatient treatment), and have previously been hospitalized (Vrabel, Rosenvinge, Hoffart, Martinsen, & Rø, 2008), all of which predict poor treatment outcome (Vandereycken, 2003). More than half of patients still meet criteria for an eating disorder up to 5 years following discharge from a residential treatment facility (Rø, Martinsen, Hoffart, & Rosenvinge, 2004; Vrabel et al., 2008) and nearly half have another hospitalization during that same follow-up period (Vrabel et al., 2008).

Cognitive Behavioral Therapy (CBT), particularly versions specific to eating disorder symptomatology, is the current treatment of choice for eating disorders. Among patients with bulimia nervosa (BN), CBT-BN (a targeted CBT treatment for BN) and CBT-E (an "enhanced" CBT for eating disorders which builds on CBT-BN by including optional modules for hypothesized maintenance factors such as perfectionism, low self-esteem, and interpersonal deficits) both produce large reductions in binge eating, purging, and other compensatory behaviors (Fairburn et al., 2009; Fairburn, 2008; Treasure et al., 1994) that tend to be well maintained over time (Waller et al., 1996). Despite this, a large subset (30–50%) of patients remains symptomatic following treatment (Fairburn, 2008; Wilson, 2005). In the case of anorexia nervosa (AN), Family Based Therapy (FBT) is effective for adolescences with a relatively short duration of illness, but an effective treatment remains to be seen for adults (Lock, 2011; Fisher, Hetrick, & Rushford, 2010). Brief manualized CBT appears to have little efficacy for AN (McIntosh et al., 2005; Wilson, Grilo, & Vitousek, 2007); CBT-E appears to be only moderately more successful (Fairburn et al., 2009). In two recent studies of CBT-E, only 60% of underweight patients agreed to engage in treatment and, of those, 50–60% showed a response to treatment (Bryne, Fursland, Allen, & Watson, 2011; Fairburn et al., 2009).

Identifying patients who are likely to benefit from specific treatments can allow clinicians to choose the treatment approach most likely to be effective. Only recently has the field begun to examine how patients with more severe eating pathology may respond differentially to treatment. Grilo, Masheb, and Crosby (2012) reported that among patients with binge eating disorder (BED), those with low self-esteem, negative effect, and overvaluation of shape and weight at baseline improved more in CBT compared to medication (Grilo et al., 2012).

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However when examining CBT alone, Castellini et al. (2012) found that patients with BED who had a lower frequency of binging, lower impulsivity, and greater emotional stability improved more with CBT than patients with more severe pathology. Butryn et al. (2006) found that patients with BN who have greater weight suppression (difference between premorbid and pretreatment weight) showed poorer post-treatment outcomes. Other studies have found that baseline symptomatology, course of illness, prior hospitalizations, and weight at baseline put patients at high risk for treatment failure from existing treatment approaches (Vandereycken, 2003; Vrabel et al., 2008). Much of the evidence suggests that CBT is most effective for patients with less severe eating pathology. Overall, although CBT has been shown to result in statistically significant reductions in eating pathology for some, there remains much room for improvement, particularly for patients with more severe pathology.

A growing body of research indicates that Acceptance and Commitment Therapy (ACT) may be an effective treatment option for patients with eating disorders. Several pilot studies of acceptance-based therapies such as dialectical behavioral therapy (Safer, Telch, & Chen, 2009), mindfulness-based cognitive therapy (Kristeller, Baer, & Quillian-Wolever, 2006), and functional contextual treatment (Anderson & Simmons, 2008) have demonstrated initial success in treating BED and BN. Similarly, a series of case reports have indicated that patients with treatment-resistant AN may benefit from ACT (Berman, Boutelle, & Crow, 2009). Though few, the studies conducted on ACT for eating disorders have been promising (Berman et al., 2009; Heffner & Eifert, 2004; Juarascio, Forman, & Herbert, 2010; Juarascio et al., 2013; Timko, Zucker, & Merwin, 2012).

ACT may particularly benefit those patients with more severe eating pathology. Given the ego-syntonic nature of eating disorder pathology, many patients, particularly those who are more severe, are reluctant to engage in treatment (Fairburn, 2008; Schmidt & Treasure, 2006). Eating disorders are characterized by high experiential avoidance (Cockell, Geller, & Linden, 2002; Keyser et al., 2009; Mizes & Arbitell, 1991; Orsillo & Batten, 2002), and the degree of experiential avoidance is cross-sectionally related to eating disorder symptom severity (Butryn et al., 2012). Cognitive rigidity, frequently seen in more severe cases of AN, has also been shown to be related to severity of disordered eating behaviors (Masuda, Price, Anderson, & Wendell, 2010). The focus on increasing psychological flexibility during an ACT-based treatment may help to decrease this rigidity, thereby allowing patients a greater ability to engage in values-based behavior change. Overall, there is a strong theoretical link between ACT-based treatment and eating disorders, particularly in more severe and treatment refractory cases. However, no studies have examined the moderating effect of eating disorder symptom severity on acceptance-based treatment outcomes.

2. Current study

The current study utilized data from a recently published report that investigated treatment-as-usual (TAU) compared to TAU+ACT for eating disorders at an adult residential facility (Juarascio et al., 2013). Patients at this facility tended to be in the more severe range of eating pathology, although the degree of severity varied widely in terms of length of illness, severity of disordered eating behaviors, and weight at admission. Prior research has found that most patients undergoing TAU at this facility experienced large improvements in disordered eating by post-treatment but remained partially symptomatic and often relapsed by six month-follow-up, leaving significant room for improvement (Juarascio et al., 2013; Lowe, Davis, Annunziato, & Lucks, 2003). Thus, researchers added twice weekly ACT groups for eating disorders to TAU and compared improvements in those receiving ACT+TAU to TAU alone. Standard ACT exercises were modified to make the protocol more specific to eating disorders (see contextualscience.org for manual). The initial report demonstrated that although both conditions showed large improvements from pre- to post-treatment, ACT+TAU trended towards faster and larger improvements in eating pathology ($p=.07$), shape concern ($p=.07$), and weight concern ($p=.09$; Juarascio et al., 2013). Using this database, we assessed how patients with more vs. less severe eating disorder symptomatology responded to ACT+TAU vs. TAU alone.

Moderators for the current study were chosen based on previous literature. Because patients with higher symptomatology may be at higher risk for treatment failure from standard behavioral treatments (Vrabel et al., 2008), we hypothesized that baseline symptom severity would moderate the effect of treatment condition, such that the advantage of ACT+TAU would be more pronounced among those endorsing more severe symptomatology. Furthermore, previous hospitalizations and weight at baseline have both been identified as risks for treatment-resistance and poor outcome (Vandereycken, 2003). We hypothesized that patients entering treatment with a prior hospitalization and lower weight at baseline (among AN patients) would show greater improvements in ACT+TAU compared to TAU.

3. Methods

3.1. Participants

The study took place at a residential treatment facility for women with eating disorders in the Mid-Atlantic region of the United States (The Renfrew Center in Philadelphia, Pennsylvania). All participants had a diagnosis of AN, BN, or eating disorder not otherwise specified in the AN or BN spectrum, based on the criteria from the Structured Clinical Interview for DSM Disorders (SCID; First, Spitzer, Gibbon, & Williams, 2002). There were no other exclusion criteria, and patients with co-morbid disorders were included in the study. A total of 140 women consented to take part in the study. The average age of the sample was 26.74 years ($SD=9.19$), with a range of 18–55. The sample was predominantly Caucasian (89.3%), with small proportions of other racial groups (African American=3.6%, Asian=2.1%, Hispanic=2.9%, Other=1.4%). The sample had a relatively long eating disorder history ($M=10.75$ years since onset, $SD=9.08$) with an average age of onset at 16.43 years ($SD=5.5$). We grouped individuals with EDNOS into AN-spectrum (i.e., $<85\%$ of their ideal weight; $n=66$, 47.1%) or BN-spectrum (i.e., $\geq 85\%$ of ideal weight and exhibited binge eating and/or compensatory behaviors; $n=74$, 52.9%) diagnoses, based on recommendations from prior studies (Fairburn & Walsh, 2002; Walsh & Garner, 1997).

Twenty women did not return pre-treatment questionnaires after providing informed consent because they were no longer interested in participating ($n=18$) or because they left the unit due to difficulty obtaining insurance coverage ($n=2$). Retention was high throughout the study, with 111 (92.5%) completing post-treatment questionnaire packets for eating disorder outcome variables (ACT+TAU=58, TAU=53). ACT+TAU participants attended 4.75 ($SD=2.51$, range 0–11) group sessions on average. Treatment completers, defined as those attending 3 or more group treatment sessions ($n=56$, of whom 52 completed post-treatment measures; 93%), were equivalent to non-group completers on demographic and baseline variables, with only length of stay differing between the two treatment conditions (group completers: 28.83 days, $SD=10.24$, non-group completers: 19.00, $SD=8.36$, $t(64)=2.86$, $p<.01$). The results described below used the completer samples (ACT+TAU: 52 patients who completed at least three groups and main outcome post-treatment measures, TAU: all 53 patients who completed main outcome post-treatment