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Acceptance and Commitment Therapy Versus Cognitive Therapy for the Treatment of Comorbid Eating Pathology

Adrienne S. Juarascio,[1] Evan M. Forman,[1] and James D. Herbert[1]

Abstract

Previous research has indicated that although eating pathology is prevalent in college populations, both CBT and non-CBT-based therapies achieve only limited effectiveness. The current study examined several questions related to the treatment of eating pathology within the context of a larger randomized controlled trial that compared standard CBT (i.e., Beck's cognitive therapy; CT) with acceptance and commitment therapy (ACT; Hayes, 2004). The results indicated that the two treatments were differentially effective at reducing eating pathology. Specifically, CT produced modest decreases in eating pathology whereas ACT produced large decreases. In addition, a weaker suggestion emerged that ACT was more effective than CT at increasing clinician-rated global functioning among those with eating pathology. These findings suggest that ACT is a useful treatment for disordered eating and potentially, for eating disorders per se.

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Keywords

Cognitive Therapy

Cognitive behavioral treatment (CBT) for eating disorders is currently considered to be the most effective treatment for eating disorders, especially for bulimia (National Institute for Clinical Excellence; NICE, 2004). CBT refers to a broad array of related treatment approaches, with the most utilized and best-researched falling under the broad rubric of Beckian cognitive therapy (CT; Beck, 1970; Forman & Herbert, 2009). Modified CT is currently considered the treatment of choice for individuals with an eating disorder. In a standard course of CT for an individual who presents with bulimia, the patient undergoes 20 treatment sessions with a focus on three major stages (Fairburn, Marcus, & Wilson, 1993). The main goals include normalization of eating, reducing attempts to diet, eliminating binge eating and purging, and altering beliefs, thoughts, and values which maintain the eating problem. The same protocol can be used for those suffering from anorexia with only minor variations and typically an extended time frame.

Research to date has shown that CT is a useful treatment for bulimia (Wilson, Grilo, & Vitousek, 2007) and it has currently been given a grade of A by the National Institute for Clinical Effectiveness Guidelines, indicating it is the treatment of choice for this disorder (NICE, 2004) . The treatment has been found to produce significant reductions in the frequency of binge eating, purging, and other compensatory behaviors (such as use of laxatives, diuretics, and fasting) used by bulimics to control their weight (Fairburn, 2008; Treasure et al., 1994). CT has been found to produce rapid changes in the eating patterns of individuals with bulimia nervosa, and its effects have also been found to be well maintained over time (Waller et al., 1996). However a relatively large subset of individuals who present for treatment do not achieve clinically significant benefit, with some studies showing only 30-50% of patients ceasing to binge and purge (Fairburn 2008; Wilson, 2005; Wilson et al., 2007). In the case of anorexia, brief manualized CT has been shown to have little effect on eating pathology (though studies have typically been small, poorly designed, and certainly need further replication; Wilson, 2005). In sum, although CT has been shown to result in statistically significant reductions in eating pathology, the percentage of patients who fully remit from the disorder leave room for improvement.

Despite the fact that CT is the current gold standard for the treatment of bulimia, there is a number of reasons it might not be best suited to treat this

type of disorder. First, patients with eating pathology (particularly those with anorexia) often have little desire to change, particularly when their disordered eating has (or is believed to have) helped them lose substantial amounts of weight and they are now closer to the thin ideal (Vanderlinden, 2008).They may thus be reluctant to engage in any treatment with a direct agenda to modify eating behavior. Secondly, CT directly attempts to change the content of maladaptive eating-related cognitions (Vanderlinden, 2008). However, the egosyntonic nature of eating disorder cognitions may make them particularly resistant to direct modification efforts (Guarda, 2008). In addition, many unhealthy eating behaviors are functional within the context of the patient's belief system. For instance, if someone believes that she weighs too much and wishes to lose weight, intense dieting or purging behaviors may in fact help her decrease her weight, at least temporarily.

Rather than attempting to modify the content of cognitions about weight and body image, it could be beneficial to focus on changing how the individual interacts with her thoughts and feelings. Acceptance of distressing thoughts could be particularly useful for individuals with an eating disorder because many of their distressing thoughts might be true, and therefore difficult to change. For example, thoughts about the imperfect nature of one's body are likely true and therefore not an appropriate type of thought to restructure. Instead, the patient could benefit from becoming more accepting of her thoughts about her imperfections, and therefore more likely to resist engaging in behaviors designed to eliminate such thoughts. This acceptance would allow the patient to be nonjudgmentally aware of her distressing thoughts, but better able to sit with the thoughts and not engage in eating disordered symptoms as a means of making the thoughts stop.

Acceptance and Commitment Therapy

Acceptance and commitment therapy (ACT) rests on the premise that a patient's reaction to a thought or feeling is changeable, but that the internal experience itself is not (Hayes, Strosahl, & Wilson, 1999). ACT seeks to teach clients how to become more accepting of distressing cognitions and feelings because attempting to control unwanted experiences is often ineffective if not counterproductive (Hayes, 2004). A treatment protocol of ACT for eating disorders has been developed and applied (Heffner, Sperry, Eifert, & Detweiler, 2002). The first step is to elicit a sense of creative hopelessness, by demonstrating that previous strategies to reduce feelings of body image dissatisfaction, including the use of compensatory strategies or extreme dieting, have not been effective (Hayes, 2004). For example, the therapist might point out that although the patient may have lost a great deal of weight, she is still just as

concerned about being overweight. Patients are shown that struggling or trying to control distressing feelings can create additional distress and the most workable solution (which eventually provides more freedom and behavioral flexibility) is to adopt an attitude of acceptance. Clarification of the patient's individual values and goals are a large focus throughout treatment. Values provide the context for specific treatment targets, and dignify the difficult work involved in increasing mindful acceptance of distressing experiences. Patients are taught that distress tolerance is not an end in and of itself, but rather a means to the end of engaging in valued behaviors. Additionally, it is important to realize that at its roots, ACT is a type of behavior therapy, and therefore standard behavioral approaches to eating disorders (e.g., exposure, self-monitoring) can be integrated within the treatment.

There are conceptual reasons why ACT might be especially effective for those with disordered eating. Previous research has suggested that higher baseline levels of mindfulness and acceptance, two central components of ACT, are associated with better treatment outcome in eating disorders (Baer, Fischer, & Huss, 2005; Kristeller, Baer, & Quillian-Wolever, 2006; Sandoz, Wilson, Merwin, in press). In addition, ACT might be well suited for eating disorders because of its focus on reducing cognitive control. Problematic desire for control over distressing thoughts is theorized to be a central feature in eating disorders (Tiggemann & Raven, 1998). For example, it is not uncommon for individuals with an eating disorder to try to avoid thoughts about their weight or shape by restricting their food intact, over exercising, or taking laxatives or diuretics. These behaviors can temporarily help to reduce concerns about weight or shape; however, the thoughts and feelings tend to return. ACT encourages patients to stop the (counterproductive) struggle with unpleasant thoughts or feelings and to decrease attempts to avoid or alter these internal experiences.

Another reason that ACT might be particularly useful for the treatment of eating pathology relates to the low motivation to change characteristic of most individuals with anorexia and many with bulimia. Lack of motivation likely relates to the fact that these individuals narrowly view their life objectives as centered around eating and appearance, and view their restricting/purging behaviors as necessary to meet these objectives. Although CBT for eating disorders does attempt to increase motivation in these patients, ACT may be particularly useful in this regard due to its focus on values. One of ACT's prime foci is on identifying and clarifying individuals' ultimate life values. By helping identify core values and the broader goals emanating from them, ACT helps the patient not only reorient toward more meaningful activities but to

become more willing to tolerate internal discomfort for the sake of what is truly important.

Subclinical Eating Pathology

Most of the research on the treatment of disordered eating has been conducted among the samples who meet full criteria for an eating disorder. However, a much bigger group of individuals exists who do not have a frank eating disorder, but still suffer from serious cognitive, affective, and behavioral eating-related symptoms, for example, intensely negative body image, obsessive thinking about food, and appearance, nutritional restriction, binging, purging (Fairburn & Bohn, 2005). In fact, large group of individuals with subclinical eating pathology and the debilitating nature of their symptoms has led many eating disorder experts to argue that eating disorder diagnosis should occur on a dimensional rather than a categorical system, and to advocate increased study of subclinical eating pathology (Lewinsohn, Striegel-Moore, & Seeley, 2000).

Research has indicated that a large number of women regularly engage in behaviors that can be classified as subclinical eating pathology (Mulholland & Mintz, 2001). Previous studies have indicated that up to 60% of college women report either occasionally or regularly using unhealthy measures such as fasting, diuretics, appetite suppressants, or purging as a means of controlling their weight (Mintz & Betz, 1986). Research has indicated that in many cases, individuals with subclinical eating pathology do not differ significantly from those receiving a diagnosis of anorexia nervosa or bulimia nervosa in terms of how distressing the symptoms can be and how they affect quality of life (Fairburn & Bohn, 2005). The study of interventions for subclinical eating pathology is especially important. Early intervention is thought to reduce the likelihood that an individual with subclinical eating pathology will develop a clinical eating disorder and can help to improve quality of life (Ratnasuriya, Eisler,& Szmukler, 1991), and the prevention of disorders before they become fully realized is known to be a more efficient intervention strategy (Institute of Medicine, 1998). However, little is currently known about which interventions are most effective for treating subclinical eating pathology or for preventing frank eating disorders (le Grange & Loeb, 2007).

Current Study

The present study aimed to investigate the relative effectiveness of ACT and CT in ameliorating subclinical eating pathology. Given the theoretical match

between ACT and the treatment of eating disorders, it was hypothesized that ACT would be more effective at reducing eating pathology. It was also hypothesized that the advantage of ACT over CT would generalize to non-bearing disordered outcomes, as the improvement in eating pathology would lead to improvements in overall functioning. Determining which treatment results in greater improvement in overall quality of life for those with eating pathology could help clinicians better select which treatment to use with clients who have comorbid eating pathology. The current study evaluated these hypotheses in a sample of post-baccalaureate students who took part in a larger study of the relative effectiveness of ACT and CT. Specifically, the study examined a subsample who presented with subclinical eating pathology at intake. Although not equivalent to a sample of individuals with frank eating disorders, the study allows for a post hoc test of the relative efficacy of two therapeutic interventions in reducing subclinical eating pathology. Results of this test could both identify effective treatments for a population with subclinical eating pathology and inform future research on treatments for diagnosable eating disorder.

Method

Participants

Participants presented for treatment at a university student-counseling center (SCC) that serves a diverse group of individuals pursuing post-baccalaureate health-related degrees and certifications. Inclusion criteria were kept broad to maximize external validity. Thus, all those presenting for individual psychotherapy were deemed eligible unless they exhibited psychotic symptoms. Individuals presenting for couples or family therapy, or who requested study skills training or crisis intervention were excluded. A total of 220 participants met baseline criteria for the larger study. From this group 31 individuals were dropped out before randomization and therefore were not included in further analyses. Additional information as to the sample or participant recruitment strategies can be found in the initial article from this data-set (Forman, Herbert, Moitra, Yeomans, & Geller, 2007).

   Degree of eating pathology was assessed both by examining those who met diagnostic criteria for an eating disorder and by obtaining the frequency of those reporting eating pathology. Results indicated that the proportion of participants (4%) who were formally diagnosed with an eating disorder was low, and somewhat lower than traditional college undergraduate populations, which this sample was not. The diagnoses included four individuals with

bulimia, two with anorexia, and one with an eating disorder not otherwise specified. However, a large proportion (i.e., 39% total, 43% of women, 16% of men) of the sample evidenced subclinical eating pathology. These 39% ($N = 55$) were included in the main analyses. Women constituted the larger portion of the remaining sample (92.6%). The participants' mean age was 26.00 years ($SD = 5.71$; range = 19-46), 53% of the sample was single (27% living with partner or spouse), and 71% were Whites (5% Black, 13% Asian, and 2% Latino). Of the 55 individuals with eating pathology, 49.1% had an anxiety disorder, 29.2% had a depressive disorder, and 11.1% had an adjustment disorder as their primary diagnosis.

Measures

Beck Depression Inventory-II (BDI-II; Beck, Steer, & Brown, *1996).* The BDI-II is an extensively used and studied inventory designed to assess current severity of depressive symptoms. Attitudes and symptoms consistent with depression are represented in a 21-item questionnaire, and patients are asked to rate the severity of each on an ordinal scale ranging from 0 to 3. This measure has demonstrated good reliability and validity in clinical samples (Beck, Steer, & Garbin, 1988).

Beck Anxiety Inventory (BAI; Beck et al., 1988). The BAI is the most widely used instrument for assessing anxious symptoms. It is a self-report measure that reliably differentiates anxious from nonanxious groups in a variety of clinical populations and discriminates anxiety from depression. The scale consists of 21 items, including physiological and cognitive features of anxiety. Participants are asked to rate how much they have been bothered by each symptom over the past week on a 4-point scale ranging from 0 to 3. The BAI has demonstrated strong validity and good reliability in clinical samples (Beck et al., 1988).

Global assessment of functioning scale (GAF; APA, 2000). The GAF score is outlined in the *Diagnostic and Statistical Manual of Mental Disorders* (4th ed., Text Revision) (*DSM-IV-TR*) as the Axis V assessment of overall functioning. This score is utilized by the clinician to report his or her assessment of the patient's overall level of functioning. This information is used to plan treatment as well as to measure its effects. The GAF ranges from 1 (*persistent danger of hurting oneself or others*) to 100 (*superior functioning*), with levels of functioning divided into 10-point ranges.

Quality of life index (QOLI; Frisch, Cornell, Villanueva, & Retzlaff, 1992). The QOLI is a measure of life satisfaction rooted in the view that overall life quality is the sum of satisfaction in a variety of life domains. Respondents

rate the importance of a variety of life domains on a scale ranging from 0 (*not important*) to 2 (*extremely important*) as well as their satisfaction with these life domains on a scale from −3 (*very dissatisfied*) to 3 (*very satisfied*). Test–retest reliability for the QOLI was strong (range of .80 to .91), and internal consistency was high (range of .77 to .89) across three clinical and three nonclinical samples (Frisch et al., 1992).

Eating pathology index (EPI). The EPI was adapted from the SCOFF, a measure designed as a brief 5-item screen for the presence of disordered eating (Morgan, Reid, & Lacey, 1999). Specfically, participants were asked "In the past week did you": (a) Believe yourself to be fat when others say you are too thin, (b) Worry you have lost control over how much you eat, (c) Say that food dominates your life, (d) Make yourself throw up, (e) Constantly worry about gaining weight. An answer of "yes" on each question receives one point, with a score of greater than or equal to 2 points indicating a likely case of anorexia or bulimia (Morgan et al., 1999). Therefore, for the present study, a score of greater than or equal to one point was used as an inclusion criteria to obtain patients with either clinical or subclinical eating pathology. Psychometric data on the SCOFF indicate that it is an acceptable screen in terms of sensitivity and specificity (Cotton, Ball, & Robinson, 2003; Morgan et al., 1999). Correlations between ED diagnosis and scores on the EPI were significant ($r = .20, p < .01$).

Procedure

After agreeing to participate in the study, consenting patients were randomly assigned to either the CT or the ACT treatment condition. Because the original study was designed to measure the effectiveness of CT and ACT, the therapists did not use specific treatment manuals, but were instead taught to employ core aspects of the treatment when refraining from cross-contamination. Although the two therapies shared a great deal of nonspecific factors and employed similar behavioral techniques, certain aspects were deemed to be unique to one condition. For example, in the CT condition core aspects were considered to be the discussion of automatic thoughts, core beliefs, and schemas; identification of cognitive distortions; cognitive disputation; and cognitive restructuring (Forman et al., 2007). Core aspects of the ACT condition included discussions of experiential acceptance and willingness, mindfulness training, values clarification, distress tolerance, and the differences between "clean" and "dirty" distress. See Forman et al. (2007) for a more thorough discussion of the content of both the CT and ACT conditions, as well as the training procedures. To replicate real-world conditions participants and therapists mutually established duration or time of termination.

At baseline, therapists conducted semi-structured interviews using the Mini International Neuropsychiatric Interview (Sheehan et al. 1997), based on the *DSM-IV-TR*(American Psychiatric Association, 1994). Also, at baseline and at termination, participants completed a questionnaire packet containing self-report measures of outcome and process variables. Therapists reported on their impressions of participants' global functioning on this same schedule. All therapists (n = 23) conducted both treatments. Therapists were doctoral psychology students in a CBT-oriented clinical psychology program who received training in both ACT and CT. To ensure treatment fidelity, independent raters coded 2-3 audio recordings of sessions for each study participant using a specially-developed, validated adherence, and competence measure (For more information about treatment conditions, treatment fidelity and competence, therapist allegiance, and participant expectancies see Forman et al., 2007).

It is important to note that although eating pathology was listed as a presenting complaint by all patients, the extent to which the eating pathology concerns were a focus of treatment varied by patient. Moreover, given the post hoc nature of the present study design, the exact degree to which these concerns were a focus of treatment is not known, thereby precluding its examination as a potential moderator of treatment efficacy.

Results

The 55 participants who demonstrated eating pathology and attended at least one treatment session were equally distributed between the two treatment conditions (ACT = 27, CT = 28). The total mean number of sessions that these participants attended was 12.70 (*SD* = 12.38), and was equivalent between treatment groups (t[53] = –1.11, p = .27). The ACT and CT group were also equivalent on all demographic and outcome measures at baseline (see Table 1). To be conservative about the effects of treatment, an intention-to-treat strategy was utilized. Specifically, the baseline data from participants (n = 3, ACT; n = 4, CT) who dropped out of the study before completing post-treatment measures were carried forward. However, to assess the effect of receiving a full dose of treatment, additional analyses using only the 48 treatment completers (n = 24, ACT; n = 24, CT) were also conducted.

A mixed (two assessment occasions by two groups) repeated-measures analysis of variance (ANOVA) was conducted to determine the extent to which eating pathology decreased between baseline and post-treatment and whether this decrease was moderated by treatment group. Both the time main effect (F[1, 53] = 16.90, p < .01, partial η^2 =.24) and the group by time

Table 1. Baseline Characteristics of Sample

| Variable | CT[a] | | ACT[b] | | |
	M	SD	M	SD	t
Age	26.39	6.65	25.58	4.57	.52
GAF	64.25	11.73	65.04	9.24	−.27
BDI	19.96	10.95	20.44	11.87	−.15
BHS	6.40	5.20	7.69	6.56	−.81
BAI	14.78	11.50	16.50	10.63	−.58
QOLItotal	0.65	2.29	1.09	2.03	−.62
EATtotal	2.42	1.23	2.14	1.02	.92

Note: GAF = global assessment of functioning scale; BDI = Beck Depression Inventory; BHS = Beck Hopelessness Scale; BAI = Beck Anxiety Inventory; QOLI = Quality of life index; EAT = Eating pathology index.
a. (N = 27).
b. (N = 28).

interaction (F[1, 53] = 4.71, p =.03, partial η^2 = .08) were significant. Specifically, results indicated a slight decrease in eating pathology across time for the CT group, but a significantly steeper decrease in eating pathology between baseline and post-treatment in the ACT group (Figure 1). To ensure that the results were not attributable to a gender confound (female participants reporting higher eating pathology), the repeated measures ANOVA was repeated controlling for gender, and similar results were obtained. These results, in combination with effect size calculations, suggest that CT (Cohen's d = 0.48) had only a relatively modest effect on eating pathology, whereas ACT (d = 1.89) effected a very large decrease in eating pathology. A similar interaction pattern was observed when using only treatment completers in the analysis (F[1, 46] = 18.51, p < .05, partial η^2 =.11), with the ACT group again showing a significantly steeper decrease in eating pathology between baseline and post-treatment.

To examine whether ACT or CT was better at reducing noneating outcome variables for those with eating pathology, a series of repeated measures ANOVAs were conducted. Each ANOVA used eating pathology at baseline (i.e., high vs. medium vs. low on the eating pathology index), treatment group (CT vs. ACT), and time (pre vs. post-treatment) as independent variables. The dependent variables included the various noneating related outcome measures (e.g., GAF, BDI, BAI, and QOLI). The time by condition by eating pathology interaction was not significant for BDI (F[3, 46] = .28, p =.84, partial η^2 =.02), BAI (F[3, 46] = .30, p = .82, partial η^2 =.02), or QOLI
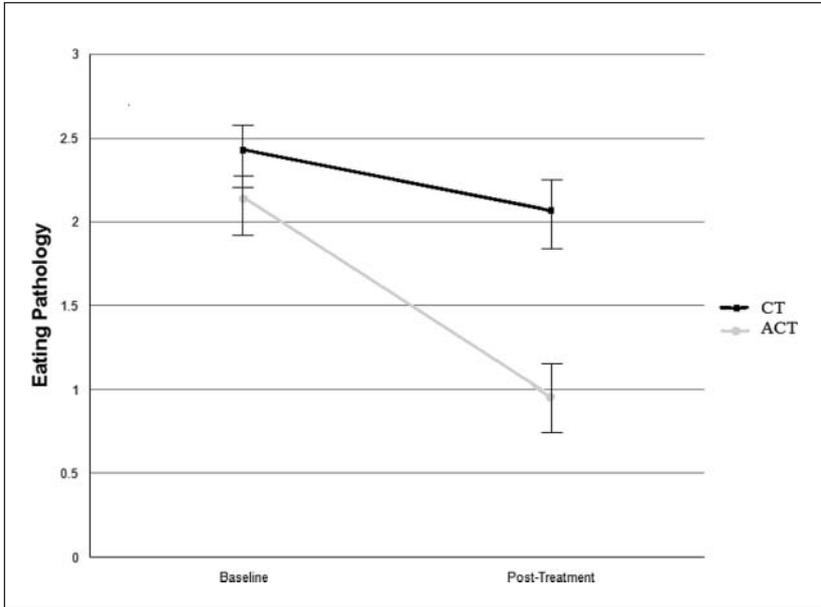
Figure 1. Interaction between group and time in predicting eating pathology

(F[3, 46] = .93, p = .44, partial η^2 = .09), indicating that eating pathology did not moderate the efficacy of the conditions at improving overall functioning as measured by these domains. However, a strong trend was found for a 3-way interaction between GAF scores, condition, and time (F[3, 46] = 2.43, p =.07, partial η^2 =.15), with those in the ACT condition showing greater gains in GAF but only for those with more severe eating pathology.

Discussion

Given the treatment-resistant nature of eating pathology, as well as the limited effectiveness of standard CT for the treatment of eating pathology, alternative treatments should be investigated. The current study compared the effectiveness of CT and ACT for the treatment of eating pathology. ACT (pre to post-treatment Cohen's d = 1.89) was shown to be superior to CT (d = 0.48) at reducing problem eating behavior. Although ACT and CT share many of the same nonspecific therapeutic effects and utilized similar behavioral techniques, there are several ways in which they differ. This study reinforces previous studies that suggested that core strategies of ACT, that is,

increasing acceptance, mindfulness, willingness, and distress tolerance, may be useful ways to promote change in a population with eating symptomotology (Baer, Fischer, & Huss, 2005; Kristeller et al., 2006; Sandoz et al., in press). The fact that minimal change in eating pathology occurred between baseline and post-treatment for those in the CT condition raises the possibility that core aspects of CT (e.g., identifying automatic thoughts and cognitive distortions, engaging in cognitive disputation and restructuring) may be less effective for this population. Although future research is sorely needed, these results suggest that an acceptance-based version of CBT could be an effective treatment for individuals with eating pathology.

Another reason that ACT may have been especially effective is that it more explicitly addresses the motivational issues commonly associated with eating pathology. One way that ACT might increase patients' motivation to engage in treatment is by clarifying goals and values that are bound up in, and obscured by, the eating disorder. By helping patients better understand and work toward values unconnected with body shape, food or weight, ACT may facilitate a desire for change and ultimately lead patients to become less resistant to treatment. Given that many patients with eating pathology have little interest in change, it is not surprising that these individuals are notoriously resistant to treatment, including state-of-the-art CT. Although these results are promising, future investigation is needed to determine the specific treatment components (e.g., increased motivation, values clarification) responsible for therapeutic effects.

There are several strengths and weaknesses associated with the present study that are worth noting. First, for a randomized controlled trial of two active treatments, the sample size of participants was relatively large. The additional power gained from such a sample size allows for greater confidence in the results. Also, few exclusion criteria were used for the study and treatments, though specified, were not manualized. Thus, both the sample and the treatments were highly representative and externally valid.

One important limitation is that the focus of the study was subclinical eating pathology; thus, findings may not generalize to patients with eating disorders per se and the extant literature that mainly focuses on clinical eating disorders. However, given the relatively low number of individuals who have a diagnosable eating disorder, the lack of motivation for treatment in this population, and the high treatment dropout rates, it can be difficult to conduct large randomized trials among the patients with eating disorders. One solution to this problem is to test possible treatments among the samples that have substantial eating pathology, but do not meet criteria for an eating disorder, as these patients are both more frequently encountered and may be more likely to remain in treatment. Because this population exhibit a similar set of cognitions

and behaviors, and demonstrate clinical impairment in functioning, pilot testing of novel treatments for eating disorders could be done in this group before utilizing the considerable resources it takes to conduct research in a sample with clinical eating disorders. This can help to provide preliminary evidence for treatments that could effectively treat eating disorders, before the substantial investigative burden is undertaken. In addition, research on the treatment of eating pathology more broadly is an important contribution to the literature, given the large numbers who demonstrate some degree of eating pathology, and the extent to which this subclinical pathology can reduce quality of life (Mulholland & Mintz, 2001).

Another limitation is that only a relatively simplistic measure of eating pathology was available for the current study. However, the questions in this measure were heavily based on a validated measure of eating pathology (the SCOFF), and the EPI was significantly correlated with an eating disorder diagnosis. The relatively low association between the EPI and eating disorder diagnosis is not necessarily of surprise or of concern given (a) the very small number of patients in this sample with an eating disorder diagnosis, (b) the likelihood of missed eating disorder diagnosis due to the fact that a structured diagnostic tool was not employed, and (c) the inclusive nature of the EPI, which was designed to capture moderate levels of eating pathology and body image dissatisfaction. In any case, these findings should be replicated using a sample with more severe eating pathology and as assessed by a stronger measure of eating pathology.

Lastly, this study was unable to measure the degree to which eating pathology was a focus of treatment, and the two types of treatment did not target eating pathology unless a patient acknowledged that eating pathology was a concern. Similarly, the extent to which the CT (or ACT) condition resembled dedicated CBT for eating disorders varied depending on the extent to which eating pathology was the core concern. In some cases the patient would have received a more generic form of CT focused on addressing anxiety and depressive symptoms and related behaviors. Thus, results might be different among patients whose eating-related symptoms were their primary complaint and who received a specific eating disorder protocols. Future research is called for that would compare ACT and CT protocols for eating pathology and/or eating disorders.

Although traditional CBT (i.e., CT) is currently the gold standard of treatment for eating disorders, previous work demonstrates that more than half of the individuals with bulimia are still bingeing and purging post-treatment, and its efficacy has not been well establish among those with anorexia. Current findings indicate that an acceptance-based version of CBT (i.e., ACT) was more effective than CT in treating eating pathology. The current study

thus raises the possibility that an acceptance-based CBT may be an effective treatment for eating concerns, but much more research is needed to replicate and refine these early findings. In addition, future research could investigate the preliminary evidence suggesting that ACT may be better at improving overall functioning in participants with eating pathology. Given the promising results for the treatment of subclinical eating pathology, research using ACT with patients who have an eating disorder could help to determine whether this could be a viable and effective treatment for a population where previous treatment has had limited success.

Declaration of Conflicting Interests

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