Clinical Psychology Review 58 (2017) 125–140

Contents lists available at ScienceDirect

Clinical Psychology Review

journal homepage: www.elsevier.com/locate/clinpsychrev

Review

The empirical status of the third-wave behaviour therapies for the treatment of eating disorders: A systematic review

Jake Linardon[a], Christopher G. Fairburn[b], Ellen E. Fitzsimmons-Craft[c], Denise E. Wilfley[c], Leah Brennan[a,*]

[a] School of Psychology, Australian Catholic University, 115 Victoria Parade/Locked Bag 4115, Melbourne, Victoria 3065, Australia
[b] Oxford University, Department of Psychiatry, Warneford Hospital, Oxford OX3 7JX, UK
[c] Department of Psychiatry, Washington University School of Medicine, Mailstop 8134-29-2100, 660 S. Euclid Ave, St. Louis, MO 63110, United States

HIGHLIGHTS

- The empirical standing of the third-wave behavior therapies for the treatment of eating disorders was evaluated.
- Large improvements in symptoms were made following each third-wave therapy.
- None of the third-wave therapies meet criteria for an empirically-supported treatment for eating disorders.
- CBT should be provided to individuals with eating disorders, with IPT considered an alternative.

ARTICLE INFO

Keywords:
Third-wave therapies
Eating disorders
Systematic review
Cognitive-behaviour therapy
Interpersonal psychotherapy

ABSTRACT

Although third-wave behaviour therapies are being increasingly used for the treatment of eating disorders, their efficacy is largely unknown. This systematic review and meta-analysis aimed to examine the empirical status of these therapies. Twenty-seven studies met full inclusion criteria. Only 13 randomized controlled trials (RCT) were identified, most on binge eating disorder (BED). Pooled within- (pre-post change) and between-groups effect sizes were calculated for the meta-analysis. Large pre-post symptom improvements were observed for all third-wave treatments, including dialectical behaviour therapy (DBT), schema therapy (ST), acceptance and commitment therapy (ACT), mindfulness-based interventions (MBI), and compassion-focused therapy (CFT). Third-wave therapies were not superior to active comparisons generally, or to cognitive-behaviour therapy (CBT) in RCTs. Based on our qualitative synthesis, none of the third-wave therapies meet established criteria for an empirically supported treatment for particular eating disorder subgroups. Until further RCTs demonstrate the efficacy of third-wave therapies for particular eating disorder subgroups, the available data suggest that CBT should retain its status as the recommended treatment approach for bulimia nervosa (BN) and BED, and the front running treatment for anorexia nervosa (AN) in adults, with interpersonal psychotherapy (IPT) considered a strong empirically-supported alternative.

1. Introduction

In the context of eating disorders, there are few empirically-supported treatments, defined as specific treatments shown to be effective in controlled research trials (Chambless & Hollon, 1998). High quality systematic reviews have demonstrated that specific forms of cognitive-behavioral therapy (CBT) are efficacious for a range of eating disorder presentations in the short and long-term (e.g., Brownley et al., 2016; National Institute of Clinical Excellence, 2017). There is also evidence that there are no statistically significant outcome differences between CBT and interpersonal psychotherapy (IPT) at long-term follow-up periods (Linardon, Wade, De la Piedad Garcia, & Brennan, 2017a). International clinical guidelines for eating disorders now recommend the use of psychological treatments that show strong empirical support, although some recommendations are also non-evidence based and likely reflect the particularities in healthcare systems (e.g., availability of outpatient services, amount of therpists trained in a particular theoretical orientation etc.; see Hilbert, Hoek, & Schmidt, 2017). From eight available clinical guidelines that recommend psychological treatments for eating disorders, all recommend CBT for bulimia nervosa

* Corresponding author at: Faculty of Health Sciences, Centre for Eating, Weight and Body Image, Australian Catholic University, 115 Victoria Parade, Locked Bag 4115, Melbourne, Victoria 3065, Australia.
E-mail address: Leah.Brennan@acu.edu.au (L. Brennan).

http://dx.doi.org/10.1016/j.cpr.2017.10.005
Received 4 July 2017; Received in revised form 16 October 2017; Accepted 20 October 2017
Available online 23 October 2017

(BN) and binge eating disorder (BED), and six recommend CBT for anorexia nervosa (AN). Four clinical guidelines recommend IPT for BN and BED, and two recommend IPT for AN. Family-based therapy, particularly for adolescents, is recommended by six and four guidelines for AN and BN, respectively. Other interventions recommended less frequently by clinical guidelines include psychodynamic therapy and MANTRA (see Hilbert et al., 2017).

Although the efficacy of specific psychological treatments, such as CBT, IPT, and FBT, has been demonstrated in numerous randomized controlled trials (RCTs), there is still room for improvement in treatment retention and outcomes. For example, attrition, relapse, and/or partial response is common in RCTs evaluating CBT and IPT (e.g., Agras, Walsh, Fairburn, Wilson, & Kraemer, 2000), although there is evidence to suggest that treatment outcome and retention rates are improving when new and enhanced versions of CBT (CBT-E) are delivered (Fairburn et al., 2015).[1] Some authors have therefore argued that a broader range of effective eating disorder treatments are needed (Wonderlich et al., 2014). The "third-wave" behavioral therapies have been suggested as potential alternatives for the treatment of eating disorders (Juarascio, Manasse, Schumacher, Espel, & Forman, 2017).

In general, while third-wave behaviour therapies have retained many of the same components as "second wave" CBT (e.g., self-monitoring, exposure and response prevention), they also use new methods and assumptions to achieve improvements in psychological functioning and clinical change (Hayes, 2004). Whereas CBT directly targets the content and validity of cognitive processes, third-wave therapies target the function or awareness of cognitions and emotions (Hofmann & Asmundson, 2008). Consequently, third-wave therapies emphasise strategies that foster acceptance, mindfulness, metacognition, and psychological flexibility, and reduce experiential avoidance (Hayes, Villatte, Levin, & Hildebrandt, 2011). This means that third-wave therapies target *response-focused* emotion regulation strategies, i.e., strategies that modulate the expression or experience of emotion regulation after its initiation, whereas CBT targets antecedent-focused emotion regulation strategies, i.e., strategies that prevent the emotion response from being activated (Hofmann & Asmundson, 2008).

There are some differences of opinion regarding the therapeutic interventions that fall under the category of third-wave behaviour therapies (Kahl, Winter, & Schweiger, 2012). However, a general consensus is that acceptance and commitment therapy (ACT), dialectical behaviour therapy (DBT), compassion mind training/compassion-focused therapy (CFT), mindfulness-based interventions (MBI), functional analytic therapy (FAP), schema therapy (ST), and metacognitive therapy (MT)[2] all fall under the third-wave behaviour therapy umbrella (Hayes, 2004; Hayes et al., 2011; Öst, 2008). These specific therapeutic interventions will therefore form the basis of this review.

Numerous systematic reviews and meta-analyses have examined the efficacy of third-wave therapies for several common mental health conditions. Dimidjiian and colleagues recently synthesised the evidence from all the available meta-analyses (k = 26) of third-wave therapies (Dimidjian et al., 2016). Most meta-analyses were based on third-wave therapies for mood and anxiety disorders, with only a small number considering personality, substance abuse, and eating disorders. From their synthesis, Dimidjiian and colleagues concluded that specific third-wave treatments such as ACT, DBT, MBIs, and BA are supported by numerous RCTs, which, when combined, demonstrate a large within-groups effect size (i.e., pre-post symptom change), and a moderate between groups effect size (using mainly wait-list controls or treatment as usual as a comparison). Meta-analyses have also been performed comparing ACT to CBT, and these meta-analyses have reported no significant outcome differences between these treatments for anxiety disorders, general mental health conditions, and depressive symptoms (A-tjak et al., 2015; Bluett, Homan, Morrison, Levin, & Twohig, 2014; Hayes, Luoma, Bond, Masuda, & Lillis, 2006; Ruiz, 2012).

The efficacy of third-wave therapies for eating disorders is much less clear. Two meta-analyses of specific third-wave therapies have been conducted. First, Lenz, Taylor, Fleming, and Serman (2014) evaluated the effectiveness of DBT for BED and BN by calculating within- (pre-post change) and between-groups (comparing DBT to wait-lists or TAU conditions only) effect sizes for eating disorder behaviours. Large within-groups ($k = 4$, $d = 1.43$) and between-groups ($k = 4$, $d = 0.82$) effect sizes were observed, leading the authors to conclude that DBT is a potentially effective treatment for eating disorders. Second, Godfrey, Gallo, and Afari (2015) reviewed studies that administered any form of MBI to treat binge eating in BED and non-clinical samples. Nine MBI studies, 6 DBT studies, and 4 ACT studies were included, and their meta-analysis was based on all interventions combined. Large (g = 1.12) within-groups and moderate (g = 0.70) between-groups effects favouring MBIs over wait-lists or TAU conditions were observed. Overall, these findings suggest that specific third-wave therapies such as DBT and MBIs are potentially effective treatments for BN and BED, at least in comparison to wait-list or TAU.

Despite the limited evidence of third-wave therapies for eating disorders, research has shown that clinicians are using third-wave techniques at least as often as they are using techniques derived from evidence-based therapies (e.g., CBT) to treat eating disorders. For example, Cowdrey and Waller (2015) found that the percentage of clients with eating disorders who reported that their therapist utilized mindfulness (77%) was typically larger than the percentage who reported their therapist used CBT-specific techniques such as food monitoring records (53%), weekly weighing (39%), and regular eating (82%). The use of third-wave therapies rather than empirically supported treatments raises concerns that those seeking treatment are not being provided with the most effective therapies. Therefore, a critical synthesis of the available literature on all third-wave eating disorder treatments studied to date is timely and pertinent.

This study therefore aims to examine the efficacy of third-wave therapies for eating disorders by (1) computing pre- to post-treatment and pre-treatment to follow-up effect sizes, and (2) comparing third-wave therapies to wait-lists, active controls, and empirically supported eating disorder treatments (i.e., CBT and IPT). Based on the available literature, we aim to investigate whether each specific third-wave therapy meets the criteria required for an empirically-supported treatment for eating disorders proposed by Chambless and Hollon (1998). Chambless and Hollon (1998) differentiated between (a) *empirically-supported treatments that are specific in their mechanisms of action*, i.e., therapy outperforms a pill or alternative evidence-based treatment in multiple RCTs conducted by different research teams, (b) *efficacious therapies*, i.e., therapy outperforms no treatment in multiple RCTs conducted by different research teams, and (c) *possibly efficacious therapies*, i.e., therapy outperforms no treatment in one study or by more than one study conducted by the same team.

The original criteria for empirically-supported treatments proposed by Chambless and Hollon (1998) were selected over more recent criteria (e.g., proposed by Tolin, McKay, Forman, Klonsky, & Thombs, 2015). As newer criteria have been criticised (for a full commentary, see Chambless, 2015), and the Chambless and Hollon (1998) criteria

[1] CBT-BN, the leading evidence-based treatment for BN, was enhanced (CBT-E) to not only make it a suitable treatment for all eating disorder presentations, but to consider and address the role of additional maintaining mechanisms that are thought to operate in a subset of individuals. These additional maintaining mechanisms include mood intolerance, interpersonal difficulties, clinical perfectionism, and core low self-esteem.

[2] There is debate as to whether expanded versions of behavioral activation (BA) are considered a third-wave treatment (Hunot et al., 2013). For this review, BA studies were not included as a third-wave treatment as this treatment for eating disorders overlapped largely with the first-wave behaviour therapy. Importantly, only one study to date (Alfonsson, Parling, & Ghaderi, 2015) has examined the efficacy of BA for eating disorders. Briefly, Alfonsson et al. (2015) randomized participants with binge eating disorder to either a 10-week group BA treatment or to a wait-list control. The authors observed no significant differences between the two groups at post-treatment on binge eating days and on EDE-Q total scores. Exclusion of this study would therefore have negligible impact on our findings.