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Specificity of psychological treatments for bulimia nervosa and binge eating disorder? A meta-analysis of direct comparisons

Glen I. Spielmans [a,*], Steven G. Benish [b], Catherine Marin [a], Wesley M. Bowman [b], Maria Menster [b], Anthony J. Wheeler [a]

[a] Department of Psychology, Metropolitan State University, United States
[b] Department of Psychology, University of Wisconsin, Platteville, United States

HIGHLIGHTS

- 53 studies with 77 direct comparisons were included in the meta-analysis.
- Bona fide CBT outperformed bona fide non-CBT; internal validity was questionable.
- Full CBT packages performed no better than their components.
- Various CBT treatments yielded roughly equivalent effects.
- There was little evidence for treatment specificity in psychotherapies for BN or BED.

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ABSTRACT

Treatment guidelines state that cognitive–behavioral therapy (CBT) and interpersonal therapy are the best-supported psychotherapies for bulimia nervosa (BN) and that CBT is the preferred psychological treatment for binge eating disorder (BED). However, no meta-analysis which both examined direct comparisons between psychological treatments for BN and BED and considered the role of moderating variables, such as the degree to which psychotherapy was bona fide, has previously been conducted Thus, such an analysis was undertaken. We included 77 comparisons reported in 53 studies. The results indicated that: (a) bona fide therapies outperformed non-bona fide treatments, (b) bona fide CBT outperformed bona fide non-CBT interventions by a statistically significant margin (only approaching statistical significance for BN and BED when examined individually), but many of these trials had confounds which limited their internal validity, (c) full CBT treatments offered no benefit over their components, and (d) the distribution of effect size differences between bona fide CBT treatments was homogeneously distributed around zero. These findings provide little support for treatment specificity in psychotherapy for BN and BED.

Contents

* Corresponding author at: Department of Psychology, Metropolitan State University, Saint Paul, MN 55108, United States. Tel.: +1 651 999 5826; fax: +1 651 999 5822.
E-mail address: glen.spielmans@metrostate.edu (G.I. Spielmans).

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1. Introduction

Bulimia nervosa (BN) and binge eating disorder (BED) are common eating disorders linked with impaired functioning and substantial psychiatric comorbidity (Hudson, Hiripi, Pope, & Kessler, 2007). Lifetime prevalence estimates for BN range from 0.5% to 3% (Hudson et al., 2007; Kendler & MacLean, 1991; Keski-Rahkonen et al., 2009; Preti et al., 2009; Wade, Bergin, Tiggemann, Bulik, & Fairburn, 2006). The course of BN often involves chronic impairment and distress, with about half of people meeting BN criteria at baseline continuing to suffer from significantly elevated eating pathology at five-year followup; most cases do not receive treatment during this timeframe (Fairburn, Cooper, Doll, Norman, & O'Connor, 2000; Keski-Rahkonen et al., 2009). For BED, lifetime prevalence estimates have varied from 1% to 7% (Grucza, Przybeck, & Cloninger, 2007; Preti et al., 2009), though most studies have found rates toward the lower end of this range (Striegel-Moore & Franko, 2003). Little research has been conducted on the natural course of BED; though it appears to have a better outcome than BN, the course of BED may be lengthy and involve long-lasting eating pathology for a subset of patients with BED (Cachelin et al., 1999; Fairburn et al., 2000; Wade et al., 2006). Findings across four taxometric studies indicated that BN and BED are qualitatively different than anorexia nervosa, obese controls, and normal controls (Williamson, Gleaves, & Stewart, 2005); BN and BED's shared factor of binge eating indicates substantial overlap between the disorders, though functional impairment and comorbidity appear more substantial in BN (Hudson et al., 2007). Further, some evidence suggests that among people with BED, those who display increased levels of shape and weight concern have higher levels of comorbid psychopathology (e.g., Grilo, White, & Masheb, 2012; Mond, Hay, Rodgers, & Owen, 2012). For a review of evidence pertaining to the validity of BED as a diagnostic entity, see Wonderlich, Gordon, Mitchell, Crosby, and Engel (2009).

Cognitive–behavioral treatment (CBT) for BN has been investigated in several trials (Thompson-Brenner, Glass, & Westen, 2003). The National Institute of Clinical Excellence (NICE) in the United Kingdom recommends CBT as the first-line treatment for BN (National Collaborating Centre for Mental Health, 2004). The American Psychological Association's Division 12 (Society of Clinical Psychology) has listed CBT and interpersonal therapy (IPT) as the only psychotherapies having "strong research support" for the treatment of BN (Loeb, undated). The American Psychiatric Association's Practice Guidelines state "For treating acute episodes of bulimia nervosa in adults, the evidence strongly supports the value of CBT as the most effective single intervention (American Psychiatric Association Work Group on Eating Disorders, 2006)." For BED, both NICE and the American Psychiatric Association guidelines also suggest that CBT is the psychological treatment of choice, with IPT and dialectical behavior therapy serving as second-line interventions (American Psychiatric Association Work Group on Eating Disorders, 2006; National Collaborating Centre for Mental Health, 2004). These recommendations suggest that some interventions – CBT and IPT for BN and CBT for BED – possess specific ingredients which lead to superior efficacy.

In contrast to theories which posit that certain psychotherapies contain specific, unique therapeutic ingredients stands the common factors model, which holds that therapeutic change is achieved through factors common across therapies such as a) the therapeutic alliance, b) a rationale that explains the cause of the client's problems and c) the corresponding use of therapeutic techniques which align with the client's understanding of his or her problems (Frank, 1971; Wampold, 2001). The common factors model postulates that therapies using both a credible explanatory model and credible therapeutic methods typically yield quite similar outcomes. Techniques are important in the common factors model, but no credible technique is presumed privileged over another.

The extent to which treatment specificity can be demonstrated has clear clinical implications; further, this has bearing on theories regarding the mechanisms of therapeutic change. Should one intervention emerge as consistently superior to others in the treatment of eating disorders, this would provide preliminary support regarding particular mechanisms of change, suggesting that particular ingredients of the empirically superior therapy were responsible for its outcomes. However, much more research would be needed to establish the particular causal mechanisms of any given treatment (see Kazdin, 2007 for a more detailed discussion). Indeed, despite decades of voluminous psychotherapy research, evidence of well-validated causal mechanisms remains elusive (Kazdin, 2007; Kolko, Brent, Baugher, Bridge, & Birmaher, 2000; Wampold, 2001).

The recommendations of NICE, the American Psychological Association's Division 12, and the American Psychiatric Association appear to argue in favor of treatment specificity for BN and BED. However, several meta-analyses in both the adult and child psychological literature have found that bona fide (fully intended as therapeutic) psychological interventions typically result in roughly equivalent benefits across a variety of disorders (Benish, Imel, & Wampold, 2008; Cuijpers, van Straten, Andersson, & van Oppen, 2008; Imel, Wampold, Miller, & Fleming, 2008; Miller, Wampold, & Varhely, 2008; Spielmans, Pasek, & McFall, 2007; Wampold et al., 1997 but also see Siev & Chambless, 2008; Wampold, Imel, & Miller, 2009). Thus, the common factors model has substantial empirical support. But none of these meta-analyses specifically studied treatments for BN or BED, leaving open the possibility that specific treatment effects exist within the area of eating disorders.

A few meta-analyses have examined how various psychological treatments compare in the treatment of BN and BED though none have been published recently (Lewandowski, Gebing, Anthony, & O'Brien, 1997; National Collaborating Centre for Mental Health, 2004; Thompson-Brenner et al., 2003). Further, no meta-analysis of psychotherapy for BED has tested the possible moderating effects of the bona fide (or non bona fide) nature of the comparison treatments. In clinical trials, some interventions lack key basic ingredients, such as an underlying theoretical rationale on which treatment is based (e.g., cognitive–behavioral theory, psychodynamic theory, etc.) or the use of some sort of viable active ingredients (e.g., cognitive restructuring, implementing plans to improve interpersonal relationships, etc.). Non-bona fide therapies have been found to yield significantly worse results compared to both their bona fide counterparts and to antidepressant medication in the treatment of depression, so this variable is apparently a key moderator of treatment effects and should be considered in meta-analyses of psychotherapy efficacy (Spielmans, Berman, & Usitalo, 2011; Spielmans et al., 2007; Wampold, Minami, Baskin, & Callen Tierney, 2002). Other variables between treatments in clinical studies are sometimes unequal, such as dosage of treatment, therapist allegiance, use of homework assignments, and training of therapists. These variables, alone or in combination might serve as confounding variables and thus should be taken into consideration by meta-analysts (Spielmans, Gatlin, & McFall, 2010).