



# To deliver or not to deliver cognitive behavioral therapy for eating disorders: Replication and extension of our understanding of why therapists fail to do what they should do



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## ABSTRACT

**Objective:** This study investigated the extent to which therapists fail to apply empirically supported treatments in a sample of clinicians in The Netherlands, delivering cognitive behavioral therapy for eating disorders (CBT-ED). It aimed to replicate previous findings, and to extend them by examining other potential intra-individual factors associated with the level of (non-)use of core CBT-ED techniques.

**Method:** Participants were 139 clinicians (127 women; mean age 41.4 years, range = 24–64) who completed an online survey about the level of use of specific techniques, their beliefs (e.g., about the importance of the alliance and use of pretreatment motivational techniques), anxiety (Intolerance of Uncertainty Scale), and personality (Ten Item Personality Inventory).

**Results:** Despite some differences with Waller's (2012) findings, the present results continue to indicate that therapists are not reliably delivering the CBT-ED techniques that would be expected to provide the best treatment to their patients. This 'non-delivery' appears to be related to clinician anxiety, temporal factors, and clinicians' beliefs about the power of the therapeutic alliance in driving therapy outcomes.

**Discussion:** Improving treatment delivery will involve working with clinicians' levels of anxiety, clarifying the lack of benefit of pre-therapy motivational enhancement work, and reminding clinicians that the therapeutic alliance is enhanced by behavioral change in CBT-ED, rather than the other way around.

## 1. Introduction

As eating disorders are severe conditions with significant psychological and physical consequences, it is extremely important that patients receive the appropriate treatment. Cognitive-behavioral therapy (CBT) for eating disorders has been investigated in many randomized controlled studies and community studies, and has demonstrated efficacy and effectiveness (e.g., Brownley et al., 2016; Fairburn et al., 2013, 2015; Hilbert & Brähler, 2012; Poulsen et al., 2014; Wonderlich et al., 2014; Zipfel et al., 2014). The latest guidelines on eating disorders worldwide (Hay et al., 2014; National Institute for Health and Care Excellence NICE, 2017; Netwerk Kwaliteitsontwikkeling GGZ, 2017) advise CBT for eating disorders (CBT-ED) as the first choice of treatment for bulimia nervosa, binge eating disorder and anorexia nervosa, and for use with similar atypical cases that do not meet full diagnostic criteria.

Given that there are well-established protocols and guidelines for using CBT in eating disorders, it is possible to define best practice for

these disorders as involving specific CBT-ED techniques, despite the lack of dismantling studies (Waller, Stringer, & Meyer, 2012). Two decades ago, Wilson (1998) observed that manualized protocols were underutilized in the treatment of eating disorders. Several studies have since investigated the use of empirically supported treatment for eating disorders (e.g., Haas & Clopton, 2003; McAlpine, Schroder, Pankratz, & Maurer, 2004; Mussell et al., 2000; Simmons, Milne & Anderson, 2008; Tobin, Banker, Weisberg, & Bowers, 2007; von Ranson & Robinson, 2006). Such studies indicate that therapists routinely use less well-supported or non-evidence based approaches, despite being trained in CBT-ED. Waller et al. (2012) showed that clinicians used core techniques (e.g., exposure, weighing patients) far less than could be justified in the context of the evidence base, and some unproven techniques (e.g., schema therapy) were used far more than the evidence would suggest. Furthermore, Waller et al. (2012) demonstrated that clinicians fall into distinct 'clusters' (i.e., groups of therapists who used different styles, such as a 'behavior-oriented', 'mindfulness-oriented', and 'motivation-oriented' style), delivering CBT-ED more or less adequately.

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Clinicians often cite the assumption that manualized approaches require very rigid implementation (Waller et al., 2013), although that assumption is not supported by the literature (Wilson, 1996). This assumption does not appear to be associated with the ‘behavioral cluster’, in which evidence-based techniques (often well described in manuals) are applied more often.

Why do clinicians omit key elements of CBT-ED when they are delivering that therapy to patients with eating disorders? The answer appears to be multifaceted. First, Waller et al. (2012) found that clinician characteristics such as age and level of anxiety are associated with poorer use of key CBT-ED techniques – particularly those that are more behavioral in nature. Second, therapists have negative attitudes towards manuals, that interfere with treatment delivery (Waller et al., 2013). That is, many clinicians assume that intuition and judgement are more important determinants of a positive outcome than the material in manuals, despite evidence to the contrary (Grove, Zald, Lebow, Snitz, & Nelson, 2000). Third, there is a tendency for clinicians to assume that their skill level is better than it actually is (Walfish, McAlister, O'Donnell, & Lambert, 2012), making clinicians more likely to attribute therapy failure to the patient than to their own failure to use an evidence-based approach (Waller & Turner, 2016). Finally, clinicians routinely overestimate the impact of less well supported treatment elements, such as pre-therapy motivational work and the therapeutic alliance (Dray & Wade, 2012; Graves et al., 2017), at the expense of carrying out evidence-based CBT-ED techniques.

Given the apparent impact of clinician characteristics on their delivery of evidence-based treatment, it is important to replicate and extend the key findings outlined above. Therefore, this study uses the survey-based methodology and questions used by Waller et al. (2012) with a sample of Dutch CBT clinicians. It will also extend that study, examining other potential intra-individual factors that might be associated with the level of use of core CBT techniques when working with eating disorders (belief in the impact of the alliance, personality, and assumed skill level compared to peers).

Thus, the first aim was to determine how routinely CBT therapists use evidence-based CBT techniques when delivering CBT for eating disorders, to test the replicability of Waller et al.'s (2012) UK-based findings among Dutch clinicians. The second aim was to extend previous research by determining whether any ‘non-use’ of evidence-based treatments is associated with clinician characteristics, including age, treatment experience, perception about their own functioning, beliefs about the importance of the therapeutic alliance, anxiety, and personality traits.

## 2. Method

### 2.1. Ethical issues

The project was authorized by the Ethical Review Committee of the Faculty of Psychology and Neuroscience (ERCPN), Maastricht University (ERCPN-171\_05\_09\_2016). All participants gave informed consent.

### 2.2. Participants

The participants were therapists, working in the field of eating disorders. Between the end of December 2016 and the end of May 2017,  $N = 185$  therapists entered the survey. Informed consent was given electronically, and two participants withdrew at this stage. Of the remaining 183 participants, 143 reported that they used CBT to treat their eating-disordered patients. A further four were removed from the sample because they indicated that they had no such experience when asked how long they had been working with this client group.

Thus, the final sample consisted of 139 clinicians (127 females) who indicated that they used CBT in the treatment of eating disorders. Their mean age was 41.4 years ( $SD = 9.71$ , range = 24–64), and their mean

time working with patients with eating disorders was 8.32 years ( $SD = 5.70$ , range = 1–25). Almost half of the sample (48.2%) currently worked between 16 and 32 h per week in eating disorders treatment. Only a small proportion (6.5%) worked full-time (i.e., 32–40 h per week) with this population, and 36.7% worked only one day per week or less with eating disorders. The clinicians were from a range of professions, including psychiatry ( $n = 63$ ), psychology ( $n = 59$ ), nursing ( $n = 2$ ), dietetics ( $n = 4$ ), somatic care ( $n = 1$ ), and other ( $n = 10$ ). Seventeen stated that they provided CBT-ED supervision to other clinicians working with eating disorders. Of the 139 clinicians, 110 (79.1%) worked with adult patients, 29 (21%) with children, and 78 (56.1%) with adolescents.

### 2.3. Procedure and measures

The data were collected via an online survey (using the Qualtrics platform). Potential participants were approached via the email lists, newsletters and website announcements of three associations that have a large proportion of CBT practitioners as members - the Dutch Academy of Eating Disorders, the SIG Eating Disorders of the Dutch Association for Cognitive Behavioral Therapies, and the Dutch Association for Health Care Psychologists - asking them to participate in an online survey. We used the following invitational text, similar to that in Waller et al.'s (2012) study: “Dear Colleague, CBT has a good record in the treatment of eating disorders. However, we know that in the treatment of other disorders, CBT is delivered in ways that differ between therapists. We are interested in how CBT clinicians prioritise different CBT techniques when working with eating disorders. We are also interested in whether there are therapist variables that influence what we decide to do when in the room with a patient. Therefore, we would like to ask you to undertake a survey of your CBT practice, and to provide some information about yourself. All responses will be totally anonymous. If you are willing to do so, please click on the link [HERE](#). Thank you for your help. If you would like a brief report on the outcome of the study, please email the researcher separately”. Two reminder emails were sent to clinicians on the email lists. It is not possible to determine a response rate, as it is not known how many people were contacted using this method.

The survey consisted of four parts - questions on demographics and therapeutic background; questions on the use of specific techniques in the treatment of eating disorders; questions about the clinicians' beliefs (e.g., importance of the therapeutic relationship; their own level of functioning and patient recovery rate); and established psychometric measures of clinicians' anxiety and personality. The demographic and therapeutic background questions included: age; gender; time spent in different aspects of therapeutic work with eating disorders; profession; professional registration; age group of patients worked with; and whether they used CBT with their eating-disordered patients.

The CBT-ED techniques enquired about are listed in Table 1. Each was rated on a scale ranging from 0%–10% to 91%–100%, regarding the proportion of patients they used this technique for (as used by Waller et al., 2012). The techniques were divided into those that are: *widely supported* (routine weighing, food diaries, cognitive restructuring, exposure, structured eating); *partially supported* (behavioral experiments, surveys [i.e., the use of photo-based inquiries to test their negative beliefs about what other people think about them]); and *unsupported* (schema therapy, mindfulness). Dialectical Behavior Therapy (DBT) was added to the list of *partially supported* techniques, as this technique has some preliminary empirical support (e.g., Bankoff, Korpel, Forbes, & Pantalone, 2012). Eye Movement Desensitization and Reprocessing (EMDR) was added to the list of *unsupported techniques*, as it is not supported by any empirical study to date, but is used by some clinicians. As with Waller et al. (2012), clinicians were also asked how long they would continue to see patients who declined to be weighed or failed to return food diaries (each was rated 0, 1, 2, 3, 4 or more than 4 further sessions). Finally, the clinicians were asked whether they pre-facced CBT-ED with sessions dedicated primarily to motivational work,

**Table 1**  
Percentages of therapists who report using specific Cognitive Behavior Therapy (CBT) techniques when delivering CBT to patients with eating disorders.

Technique	n	Percentage of clinicians who use each technique, by technique and percentage of patients for whom this technique is used									
		0%–10%	11%–20%	21%–30%	31%–40%	41%–50%	51%–60%	61%–70%	71%–80%	81%–90%	91%–100%
<b>Widely supported practice</b>											
Routine weighing	119	34.5	5.9	0	2.5	5.0	3.4	4.2	8.4	7.6	28.6
Food diaries	116	9.5	1.7	2.6	1.7	6.0	4.3	6.9	7.8	16.4	43.1
Cognitive restructuring	116	3.4	0	2.6	2.6	6.0	4.3	6.0	18.1	18.1	38.8
Exposure	116	.9	3.4	5.2	3.4	8.6	6.0	6.9	11.2	12.9	41.4
Structured Eating	115	.9	2.6	1.7	0	3.5	4.3	4.3	7.0	13.9	61.7
<b>Partially supported practice</b>											
Behavioral experiments	116	.9	3.4	.9	1.7	5.2	6.0	10.3	16.4	26.7	28.4
Surveys	115	48.7	12.2	9.6	5.2	4.3	6.1	6.1	5.2	1.7	.9
Dialectical behavioral therapy	114	71.9	9.6	9.6	1.8	0	2.6	0	3.5	9	.9
<b>Unsupported practice</b>											
Schema therapy	116	49.1	12.9	7.8	8.6	5.2	2.6	6.0	4.3	0	3.4
Mindfulness	115	36.5	15.7	7.8	10.4	5.2	3.5	3.5	7.0	5.2	5.2
EMDR	114	63.2	7.9	11.4	6.1	.9	3.5	1.8	2.6	1.8	.9

and what manuals (if any) they used in directing CBT-ED for these patients.

Next, clinicians were asked to indicate on a visual analogue scale how important they thought the therapeutic relationship is in the treatment of eating disorders (0 = “Not important at all”; 100 = “This is the most important thing”). The same scale was used to indicate the clinicians’ beliefs regarding how much their own treatment results could be explained by the therapeutic relationship.

Walfish et al.’s (2012) questions were used to determine clinicians’ beliefs about their level of clinical skill, relative to their colleagues. Therefore, scores above 50% would indicate believing that one is a better clinician than the mean among one’s colleagues.

Finally, each clinician completed Dutch versions of standardized measures of anxiety (*Intolerance of Uncertainty Scale - Short Form (IUS-12)* - Carleton, Norton, & Asmundson, 2007; de Bruin, Rassin, van der Heiden, & Muris, 2006) and personality (*Ten Item Personality Inventory (TIPI)* - Gosling, Rentfrow, & Swann, 2003; Hofmans, Kuppens, Allik, 2008). The IUS-12 correlates well with clinical anxiety measures. The Dutch IUS-12 is highly correlated with the Dutch full (27-item) version ( $r = 0.92$ ), and has high internal consistency ( $\alpha = 0.83$ ) (Helsen, Van den Bussche, Vlaeyen, & Goubert, 2013). Two factors can be distinguished: Prospective Anxiety (future-related fear and anxiety; item 1 through 7;  $\alpha = 0.78$ ), and Inhibitory Anxiety (uncertainty inhibiting action or experience; item 8 through 12;  $\alpha = 0.72$ ) (Helsen et al., 2013). The TIPI is a ten-item global measure of the Big Five dimensions: extraversion, agreeableness, conscientiousness, emotional stability, and openness to experiences.

#### 2.4. Data analysis

SPSS (Version 24.0) was used to analyze the data. Missing data were not replaced, resulting in different sample sizes across analyses. Inspection of the data showed that nonparametric analyses were appropriate. Exploratory analyses showed no clear pattern of difference between supervisors and non-supervisors (available from the lead author, on request). Therefore, analyses were carried out for the group as a whole. Descriptive data were calculated for the use of specific CBT techniques. Correlations (Spearman’s  $\rho$ ) were used to test associations between use of those techniques and clinician characteristics. The use of specific techniques was compared across those clinicians who did and did not use pre-CBT motivational work and CBT manuals, using Mann-Whitney tests. Cluster analysis was used to determine whether clinicians fell into groups distinguished by patterns of techniques used, using existing criteria (Aldenderfer & Blashfield, 1984). A two-step cluster method was used, due to inclusion of both dimensional and categorical variables. This method uses the log-likelihood criterion for

distance measurement, given the use of categorical measures. The number of clusters was set by identifying where the Schwarz Bayesian Criterion becomes small and the change between clusters is small.

### 3. Results

#### 3.1. Clinician use of techniques in CBT for eating disorders

The majority of the clinicians ( $n = 94/113$ ; 83.2%) reported using a CBT-ED manual for their work with patients with eating disorders.<sup>1</sup> Despite the lack of supporting evidence for this technique (Dray & Wade, 2012), the majority ( $n = 85/117$ ; 72.6%) of the sample reported using pre-therapy motivational work.

Table 1 shows the percentages of clinicians who reported using the defined techniques with different proportions of their CBT-ED patients. Apart from structured eating, fewer than half of clinicians used any of the supported techniques routinely with all of their patients. For example, despite the importance of weighing within CBT-ED, fewer than 30% of clinicians weighed patients on every occasion, with more indicating that they never did so. Only around 40% of the clinicians routinely used other core CBT-ED elements, such as food diaries, cognitive restructuring and exposure. Only 10% ( $n = 14$ ) of the clinicians reported using all four core CBT-ED techniques (excluding weekly weighing) in 91–100% of the cases. Partially supported practices showed different patterns of use – surveys and DBT were rarely used, but behavioral experiments were employed more widely. Unsupported practices were rarely used.

#### 3.2. Association of clinician characteristics with the use of CBT techniques

Table 2 shows the correlations between a number of clinician’s characteristics and the use of CBT-ED techniques. Table 3 specifically shows the correlations between clinicians’ anxiety (the subscales and the total score on the IUS) and the use of CBT-ED techniques. Finally, Table 4 shows the correlations between clinicians’ personality characteristics and the use of CBT-ED techniques.

**Temporal characteristics.** Table 2 shows the associations of clinicians’ temporal characteristics and specific beliefs with the use of CBT techniques. Older clinicians were more likely to use the unsupported

<sup>1</sup> Participants could indicate more than one answer. None used Bulik (1994); 13 used Fairburn, Marcus, and Wilson (1993); 74 used Fairburn (2008); two used Garner et al. (1997); none used Gowers and Green (2009); 11 used Waller et al. (2007); 18 used Vanderlinden, Pieters, Probst, and Norré (2007); 31 used Beer and Tobias (2011); and 16 used other CBT manuals. Others used chapters by Vanderlinden, Pieters, Probst, and Norré (2011) and by Jansen and Mulkens (2011); Jansen, Elgersma, and Mulkens (2014).

**Table 2**  
Associations (Spearman's Rho) of the use of specific cognitive behavioral techniques with individual clinician characteristics and beliefs.

Technique	Clinician characteristic and belief				
	Age	Time in the field	Belief that Th.Re is important in treating ED	Belief how many percent of treatment result can be ascribed to Th. Re	Belief about performance as a therapist
<b>Widely supported practice</b>					
Routine weighing	-.104	.021	-.204*	-.058	.097
Session seen without weighing	-.102	.031	.368**	.332**	-.106
Food diaries	-.072	.073	-.281**	-.132	.133
Session seen without diaries	-.035	-.142	.247**	.239*	-.006
Cognitive restructuring	.173	.085	.029	-.003	.088
Exposure	.069	.155	-.103	-.204*	.095
Structured eating	.037	.197*	-.222*	-.207*	.247**
<b>Partially supported practice</b>					
Behavioral experiments	.067	.166	-.179	-.187*	.110
Surveys	.039	.052	-.043	.169	.053
Dialectical behavioral therapy	.023	.136	.123	.042	-.030
<b>Unsupported practice</b>					
Schema therapy	-.001	.077	.071	.172	-.026
Mindfulness	.186*	-.127	.180	.131	.106
EMDR	.293**	.160	.127	.052	-.150

Note. \*  $p < .05$ . \*\*  $p < .01$ .

**Table 3**  
Associations (Spearman's Rho) of the use of specific cognitive behavioral techniques with IUS Scores.

Technique	IUS Total Uncertainty Score	IUS Prospective Anxiety	IUS Inhibitory Anxiety
<b>Widely supported practice</b>			
Routine weighing	-.072	-.014	-.112
Session seen without weighing	.210*	.151	.224*
Food diaries	-.048	-.014	-.046
Sessions seen without diary	.107	.060	.078
Cognitive restructuring	.134	-.075	-.183
Exposure	-.309**	-.185	-.375**
Structured eating	-.095	-.002	-.177
<b>Partially supported practice</b>			
Behavioral experiments	-.288*	-.171	-.334**
Surveys	-.122	-.120	-.053
Dialectical behavioral therapy	.076	.012	.101
<b>Unsupported practice</b>			
Schema therapy	.006	-.004	.073
Mindfulness	-.107	-.166	.019
EMDR	-.120	-.088	-.117

Note. IUS = Intolerance of Uncertainty Scale.

\*  $p < .05$ . \*\*  $p < .01$ .

practices of mindfulness and EMDR, whereas a longer time spent working with eating disorders was associated with greater use of structured eating.

**Clinician beliefs.** Clinicians with a stronger belief in the importance of the therapeutic relationship in treating eating disorders were less likely to use a large number of strongly supported CBT-ED techniques, including routine weighing, food diaries, and structured eating. A stronger belief in the alliance was also associated with a greater likelihood of continuing to see patients who refused to be weighed or complete food diaries.

In a similar vein, clinicians who displayed stronger beliefs that a large amount of treatment outcomes can be ascribed to the therapeutic relationship were less likely to use the evidence-based CBT methods of exposure, structured eating and behavioral experiments. These clinicians who expected the effects of treatment to be better explained by the therapeutic relationship were more likely to continue seeing patients who refused to be weighed or complete food diaries.

The clinicians rated their skill relative to others at above the 50% that would be expected (mean = 63.1%;  $SD = 11.8$ ; range 45–92). However, this rating was related to the use of only one CBT-ED technique - those clinicians who rated their skill more highly were more likely to use structured eating.

Therefore, it appears that clinicians' beliefs in the importance of the alliance and its ability to deliver better outcomes are more closely linked to (poorer) CBT-ED delivery than clinicians' beliefs about their own skill level.

**Clinician anxiety.** Table 3 shows that clinicians with higher IUS-12 scores (particularly Inhibitory Anxiety) were less likely to implement key CBT-ED techniques based on behavioral change – particularly exposure and behavioral experiments. They were also more likely to continue seeing patients who refused to complete food diaries.

**Clinician personality.** Table 4 shows that greater clinician 'extraversion' was associated with a greater use of some core CBT-ED techniques (diaries, cognitive restructuring, and exposure). In contrast, 'conscientiousness' was associated with a more mixed pattern of technique use (greater use of exposure and schema therapy, and seeing patients for longer when diaries were not completed). Both the traits 'emotional stability' and 'openness to experiences' were associated with less continuation of therapy without weighing. Finally, 'emotional stability' was also associated with a greater use of surveys.

### 3.3. Association of the use of CBT –ED techniques with categorical clinical variables

Two categorical measures were tested for their association with the use of CBT-ED techniques – whether or not clinicians used pre-therapy motivational enhancement methods, and whether they used therapy manuals to guide their CBT intervention with patients with eating disorders.

**Use of pre-therapy motivational work.** Mann-Whitney tests were used to compare clinicians' use of individual CBT-ED techniques across those who did or did not use motivational work prior to CBT. There were no differences between these groups in the use of cognitive restructuring, exposure, behavioral experiments, surveys, mindfulness, EMDR and dialectical behavior therapy. However, clinicians who reported using motivational work prior to CBT were less likely to use routine weighing ( $Z = 3.26$ ,  $p = .001$ ), food diaries ( $Z = 3.06$ ,  $p = .002$ ), or structured eating ( $Z = 2.58$ ,  $p = .01$ ). In contrast, they were more likely to use schema therapy ( $Z = 2.58$ ,  $p = .01$ ), and to continue seeing patients when they refused to be weighed ( $Z = 2.15$ ,

**Table 4**  
Associations (Spearman's Rho) of the use of specific cognitive behavioral techniques with TIPI Scores.

Technique	TIPI Extraversion	TIPI Agreeableness	TIPI Conscientiousness	TIPI Emo. Stability	TIPI Open. to Exp.
<b>Widely supported practice</b>					
Routine weighing	-.056	-.031	-.115	.143	.119
Session seen without weighing	-.012	.039	.073	-.266**	-.220*
Food diaries	.232*	-.102	-.011	.035	.019
Sessions seen without diary	.111	.087	.194*	-.117	.007
Cognitive restructuring	.192*	.006	.114	.030	.058
Exposure	.190*	.018	.205*	.021	.159
Structured eating	.107	.047	-.008	-.087	-.047
<b>Partially supported practice</b>					
Behavioral experiments	.116	.064	.013	.025	.071
Surveys	.073	.028	-.023	.205*	.177
Dialectical behavioral therapy	-.025				
<b>Unsupported practice</b>					
Schema therapy	.010	.010	.206*	-.093	-.083
Mindfulness	.067	.137	-.130	.165	.164
EMDR	.171	-.096	-.027	-.007	-.052

Note. TIPI = Ten-Item Personality Inventory\*  $p < .05$ . \*\*  $p < .01$ .

$p = .032$ ) or when they refused to complete food diaries ( $Z = 3.61$ ,  $p < .001$ ).

Mann-Whitney tests were used to compare clinicians' beliefs about the therapeutic relationship between those who did or did not use motivational work prior to CBT-ED. There were no differences between these groups in the importance ascribed to the therapeutic relationship in the treatment of eating disorders, or the amount of outcome variance explained by that relationship.

**Use of treatment manuals.** Mann-Whitney tests showed no differences between those who did or did not report using treatment manuals in their response to the patient refusing to be weighed or complete food diaries, or in the use of routine weighing, food diaries, cognitive restructuring, schema therapy, exposure, structured eating, mindfulness, EMDR, and dialectical behavioral therapy. The only differences were that clinicians who used treatment manuals reported being more likely to use behavioral experiments ( $Z = 2.72$ ,  $p = .007$ ) and surveys ( $Z = 2.26$ ,  $p = .024$ ).

Mann-Whitney tests were also used to compare clinicians' beliefs about the therapeutic relationship across those who did or did not use CBT treatment manuals. Clinicians who used CBT treatment manuals were less likely to believe that the therapeutic relationship is important in the treatment of eating disorders ( $Z = 2.70$ ,  $p = .007$ ), and believed that the percentage of outcome explained by the therapeutic relationship was lower ( $Z = 2.448$ ,  $p = .014$ ).

### 3.4. Do clinicians fall into natural clusters, based on their use of CBT-ED techniques?

Two-step cluster-analysis was used, including categorical variables (use of CBT manuals, use of pre-CBT motivational session) and dimensional variables (frequency of weighing, sessions seen without weighing, food diary, sessions seen without diary, EMDR, schema therapy, structured eating, cognitive restructuring, mindfulness, surveys, behavioral experiments, exposure, dialectical behavioral therapy) in the analysis. The analysis yielded two clusters, but the cluster quality was poor (silhouette score = 0.2). Next, we forced a three-cluster solution to the data. However, the cluster quality was poorer than the two-factor solution (silhouette score = 0.1). Therefore, it cannot be concluded that these Dutch clinicians formed the same natural clusters as the UK clinicians reported by Waller et al. (2012).

## 4. Discussion

This study has replicated and extended previous research that has examined the use of CBT-ED techniques by clinicians who reported that they were delivering CBT for eating disorders (Waller et al., 2012). The

study used a similar methodology to the previous study, but was conducted on Dutch therapists (rather than from the UK), and had a larger sample. The extension of the study involved a wider investigation of the clinician characteristics studied, including personality and clinician beliefs about the power of the therapeutic alliance and their own skill level.

There were some key differences between the Dutch and UK clinicians, with a higher proportion of clinicians in the current sample reporting use of treatment manuals (83.2% vs 50%). While the use of the specific CBT techniques was below the level that one would expect if following protocols, this Dutch sample were more likely to use structured eating, diaries, cognitive restructuring and exposure than was the case for the UK clinicians in the previous study. However, there were some areas where the Dutch clinicians used unsupported techniques more than the UK group or used supported methods less. For example, the Dutch group used pre-therapy motivational work more than the UK group (73% vs 57%), but used weighing less than the UK group.

These differences between the samples might reflect cultural differences, with CBT-ED delivered more accurately in the Netherlands than in the UK. Alternatively, they might represent a change in training, competence and practice over the six years since the Waller et al. (2012) data were collected. The lack of distinct clusters of clinicians might indicate that training and competence are becoming more standardized over time. Nevertheless, the present results are concerning, as they continue to indicate that CBT therapists are not demonstrating the competence and adherence that would be expected in order to provide the best treatment to their patients.

This 'non-use of CBT techniques' appears to be related to similar factors to those shown by Waller et al. (2012), with clinician anxiety and temporal factors being key. However, this study also indicates that other clinician characteristics are related to the use of core techniques, with particular roles for clinicians' beliefs about the power of the therapeutic alliance in driving therapy outcomes. While there is a small but reliable association between therapy outcome and the therapeutic alliance, it is important to understand that association when using CBT for eating disorders. In a meta-analysis, Graves et al. (2017) have found that when treating adults with eating disorders using CBT-ED, the therapeutic alliance does not drive change in behaviors. Instead, early change in behaviors drives a better alliance later in therapy. The negative associations found in this study suggest that clinicians who report holding a (misplaced) belief in the power of the therapeutic relationship also use fewer of the behavioral change techniques that would drive both recovery (Raykos, McEvoy, Fursland, Ridley, & Nathan, 2013; Turner, Marshall, Wood, Stopa, & Waller, 2016; Vall & Wade, 2015) and the positive therapeutic relationship that they are striving to prioritize.

It is also important to consider the potential issues around the use of pre-treatment motivational work for eating disorders, given that nearly three-quarters of the clinicians reported using this approach. It is already well established that such motivational work does not have any clear positive impact on therapy outcomes for eating disorders (e.g., Dray & Wade, 2012; Waller, 2012). However, it is possible that the use of pre-therapy motivational work is not simply unhelpful – it could even hinder treatment. While the current data do not demonstrate such causality, it is possible that clinicians who use pre-therapy motivational work are less likely to use core CBT-ED techniques, thus potentially reducing the likelihood of the early behavioral change that results in superior outcomes from CBT-ED (e.g., Vall & Wade, 2015). Before one could reach such a firm conclusion, further research will be needed to determine whether there is such a negative causal relationship.

To summarise, clinician anxiety is significantly associated with therapists' non-use of CBT-ED techniques, particularly the more behavioral elements. The role of inhibitory anxiety is such that it is likely that the clinicians are less likely to start the necessary interventions, due to not being certain about the outcome. However, both clinicians' beliefs in the impact of the therapeutic alliance and their use of pre-therapy motivational enhancement approaches are also linked to poor use of core behavioral elements of CBT-ED for eating disorders, possibly because clinicians see it as important to focus on the alliance and motivation, prioritizing them over those behavioral techniques. It is also important to note that there was no association between belief in the alliance's role and the use of pre-therapy motivational work, indicating that these two potential causes of 'non-delivery' might operate independently to hamper the delivery of evidence-based CBT-ED.

Evidence-based CBT-ED is not used as widely in treating eating disorders (e.g., Tobin et al., 2007; Von Ranson & Robinson, 2006) as guidelines would indicate (e.g., NICE, 2017). Furthermore, CBT-ED appears to be delivered poorly in many cases (e.g., Waller et al., 2012). Overall, these findings suggest a small improvement in the delivery of CBT-ED relative to the Waller et al. (2012) data, though the results are still far from optimal and indicate a lot of room for further improvement.

#### 4.1. Limitations

It is important to bear in mind that this survey-based methodology relies on clinician self-report, and it will be necessary to develop more robust ways of measuring therapist behavior (particularly observational methods) before one can be sure about the validity of this approach. Moreover, the report is correlational in nature and no causal implications can be made. While such 'non-delivery' is also present in other therapies and disorders (e.g., DiGiorgio, Glass, & Arnkoff, 2010; Kosmerley, Waller, & Robinson, 2015), further research is needed to determine whether the correlates of poor implementation outlined here are relevant more broadly. Having identified key variables in this study, we recommend that they should be the focus of future research, reducing the risk of Type 1 errors in conducting the correlations.

Other important limitations also need to be considered in future research. First, the results might not be applicable outside of the Dutch system. Further studies are needed to determine whether issues such as clinician beliefs and anxiety are related to the Dutch training context, and are therefore not found universally. There is also a need to consider the self-selecting nature of the sample. For example, it is possible that the participants here were not representative of the full clinician population, and that the findings here under- or over-estimate the degree to which clinicians adhere to protocols for different disorders.

#### 4.2. Future recommendations

In clinical terms, these findings suggest that the training and supervision of eating disorders therapists should address the development of competence in core skills, but should also focus on developing and

maintaining adherence to the key CBT-ED techniques – particularly the more behavioral elements. Achieving competence and adherence will not only be a matter of developing skills and ensuring their implementation, but will also require attention to the factors that are likely to cause therapists to not use those skills. The present results suggest that this goal will involve working with clinician's levels of anxiety (e.g., Meyer, Farrell, Kemp, Blakey, & Deacon, 2014), clarifying the lack of benefit of pre-therapy motivational enhancement work (e.g., Waller, 2012), and reminding clinicians that the therapeutic alliance is enhanced by behavioral change in CBT-ED, rather than the other way around (e.g., Graves et al., 2017). Given the relatively recent development of much of this evidence, it is important that trainers and supervisors should ensure that they are up to date with the evidence base, so that they can pass it on to clinicians to implement. As it can take 15–20 years for research evidence to filter into routine practice (Institute of Medicine, 2001) and given that clinicians over-rate their psychotherapy skills and outcomes (Walfish et al., 2012), getting clinicians, trainers and supervisors up to date will require consistent information and practice over an extended period. It is also likely to require clinicians to be more open about any shortfalls in their practice, and supervisors to be more focused on patterns of patient outcomes.

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