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10-session Cognitive Behavioural Therapy (CBT-T) for Eating Disorders: A Systematic Review and Narrative Synthesis

Andreas Paphiti[1,2] · **Emily Newman**[1]

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Abstract

To review the literature examining the effectiveness and efficacy of a cognitive behavioural therapy (CBT) for eating disorders delivered in ten sessions for those who are not underweight (CBT-T). A systematic search of the literature (MEDLINE, EMBASE, PsycINFO, Scopus and ProQuest) was conducted to identify relevant publications to date at the time of March 2022 (re-run in May 2023). Intervention studies of any study design that investigated CBT-T offering outcome data at least pre- to post- intervention for eating disorder and related outcomes were included. Results were reported for treatment attrition, abstinence, remission, eating disorder psychopathology, disordered eating behaviours, psychosocial impairment, depression and anxiety and synthesised using a narrative synthesis framework. The Effective Public Health Practice Project (EPHPP) quality assessment tool (Thomas et al., 2004) was used to assess the quality of included studies. Outcomes for 555 people who received CBT-T across eight studies (one randomised control trial and seven non-randomised studies) were synthesised. Support was found for the effectiveness and efficacy of CBT-T for a range of non-underweight eating disorders, with respect to eating disorder psychopathology, disordered eating behaviours, psychosocial impairment, abstinence and remission. CBT-T also led to improvements for depression and anxiety symptoms. CBT-T appears to improve eating disorder and co-morbid outcomes for people with non-underweight eating disorders within ten sessions, with comparable results to standard-length CBT for eating disorders (CBT-ED). Although results for CBT-T are promising, there were concerns with the quality of the studies. Future research is required to strengthen the evidence base with larger, higher-quality studies which compare CBT-T directly with recommended psychological treatments, such as standard-length CBT-ED.

Keywords Eating disorders · Non-underweight eating disorders · Cognitive behavioural therapy · Ten-session cognitive behavioural therapy · Treatment outcomes

Extended author information available on the last page of the article

Introduction

Eating disorders are characterised by a morbid preoccupation with weight and body shape, and disturbances in eating behaviours (Nicholls & Viner, 2005; Schmidt et al., 2016). The lifetime prevalence of eating disorders is estimated around 8.4% for women and 2.2% for men (Galmiche et al., 2019). People with eating disorders, particularly those with anorexia nervosa, have significantly increased mortality rates (Chesney et al., 2014; Crow et al., 2009).

Cognitive behavioural therapy (CBT) for eating disorders (CBT-ED) is the most extensively investigated treatment for this population (Linardon et al., 2017b). CBT-ED is a generic term that includes different evidence-based forms of CBT for eating disorders (Fairburn, 2008; Waller et al., 2007). These different forms of CBT-ED share common aims to address the cognitions and emotions that underpin eating disorder psychopathology through nutritional and behavioural changes (Mulkens & Waller, 2021).

Randomised control trials (RCTs) have demonstrated that CBT-ED is effective for a range of eating disorders, including bulimia nervosa (BN), binge eating disorder (BED), other specified feeding and eating disorder (OSFED), and anorexia nervosa (AN), with large improvements in eating disorder symptoms (Byrne et al., 2017; Fairburn et al., 1991, 2009, 2015; Ghaderi, 2006). Although RCTs are considered the 'gold standard' of evidence-based research (Meldrum, 2000), they have been criticised for not reflecting routine clinical practice due to being tightly controlled (Fensterheim & Raw, 1996); for example, participants are characterised as typically presenting with less severe mental health difficulties and fewer co-morbidities than those who routinely seek treatment (Kazdin, 2008). However, several studies have found CBT-ED to be effective in routine clinical practice (Knott et al., 2015; Signorini et al., 2015; Turner et al., 2015a, b). Systematic reviews of randomised and non-randomised studies have found CBT-ED to be an effective treatment for patients (Atwood & Friedman, 2020; Dahlenburg et al., 2019; de Jong et al., 2018), with CBT-ED being either equally efficacious or superior to other psychological treatments (Linardon et al., 2017b; Slade et al., 2018).

This evidence is reflected in clinical practice guidelines, with CBT-ED listed as one of the recommended treatments for children, young people, and adults with AN, BN, BED and OSFED (NHS Education for Scotland [NES], 2014, 2015; NICE, 2017; Scottish Intercollegiate Guidelines Network [SIGN], 2022). For adults with non-underweight eating disorders, including BN, BED and atypical cases, clinical guidelines state that CBT based guided self-help (GSH) should be the first-line treatment (NICE, 2017; NES, 2014), as is the case for children and young people with BED (NICE, 2017). If GSH is unacceptable, contraindicated, or ineffective, CBT-ED is recommended instead.

Guidelines typically recommend 16 to 20 sessions of CBT-ED (NES, 2014; NICE, 2017) for those with non-underweight eating disorders, such as BN and BED, and 40 sessions for those who are underweight, namely those with AN (Fairburn, 2008; NICE, 2017). However, NICE (2017) acknowledge that

attending a high number of sessions is a substantial commitment for those with an eating disorder. There is also increasing pressure from services for shorter, cost-effective psychological therapies for eating disorders that are also evidence-based (Pellizzer et al., 2019a). Cost of treatment is a concern for services (Watson et al., 2017; Weissman & Rosselli, 2017) in which there is high and expensive use of resources (Green & Griffiths, 2014; Tseng et al., 2021). Furthermore, the COVID-19 pandemic has heavily impacted those with eating disorders and increased demand on services. There are reports of increases of worsening eating disorder symptomology and people requiring treatment worldwide (Fernández-Aranda et al., 2020; Haripersad et al., 2021; Phillipou et al., 2021), including increases in inpatient admissions and re-admissions (Hansen et al., 2021; Matthews et al., 2021), and outpatient referrals (Hansen et al., 2021; Solmi et al., 2021). This impact has been noted for children and young people in particular; for example, National Health Service (NHS) child and adolescent mental health services in England have seen referrals increase by almost two thirds since pre-pandemic rates (NHS England, 2022).

In the UK, NICE (2017) have recommended the evaluation of briefer psychological treatments for eating disorders and highlight that people may be able to achieve remission with a smaller number of sessions or over a shorter period of time. Evidence has established that early symptom changes, such as changes in binge eating, purging and dietary restraint, are a consistent and strong predictor of outcome for all eating disorders (Linardon et al., 2017a; Vall & Wade, 2015). Furthermore, most change is found in the first four to six weeks of eating disorder treatment (Linardon et al., 2016; Vall & Wade, 2015). No correlation has been found between amount of improvement and session length after 8–12 sessions of CBT-ED (Rose & Waller, 2017). Current guidelines reflect a stepped-care approach for non-underweight eating disorders from GSH to CBT-ED and evidence has found this approach to be cost-effective for eating disorder treatment (Crow et al., 2013). Wade et al. (2021) argued that there is a 'gap' in service provision for a therapy which is more intensive than GSH, but shorter and less expensive to deliver than CBT-ED, given the recommended duration of CBT-ED where body mass index (BMI) is above 17.5 is 20 sessions with an experienced therapist over a five-month period (Fairburn, 2008). This number of sessions is around twice the length of CBT recommended for other disorders, such as for anxiety and depression (NES, 2014), which can be delivered by less specialist therapists (Layard & Clark, 2014). Evidence has demonstrated that brief versions of CBT are as effective for anxiety disorders as longer versions (Öst & Ollendick, 2017). Reducing the length of CBT-ED could potentially reduce waiting lists and allow faster access to treatment (Tatham et al., 2020).

Recently a briefer CBT-ED for non-underweight patients which is delivered over ten sessions, CBT-T, has been developed and introduced by Waller et al. (2019). CBT-T is a transdiagnostic, manualised outpatient therapy for those with an eating disorder and a BMI above 17.5, which can be delivered by novice therapists under supervision (such as assistant and trainee clinical psychologists), as well as qualified therapists. The CBT-T protocol (Waller et al., 2019) adopts key elements of CBT-ED (Fairburn, 2008; Waller et al., 2007) including in-session weighing, psychoeducation, nutritional change, exposure, behavioural

experiments, cognitive restructuring, body image work and relapse prevention. Initially, four sessions are offered, with treatment extended to ten sessions dependent on active engagement and progress with therapeutic tasks (Waller et al., 2019), recognising that early change in outpatient psychological therapies is one of the best predictors of positive outcomes for eating disorders (Vall & Wade, 2015). Preliminary evidence has found that CBT-T reduces cognitive and behavioural eating disorders symptoms, along with anxiety and depression symptoms (Pellizzer et al., 2019a, b; Waller et al., 2018), with comparable effects to 20 session versions of CBT-ED (such as CBT-E, Tatham et al., 2020) when delivered by assistant and trainee psychologists under supervision. A qualitative study reported positive patient experiences of CBT-T, with recipients feeling that CBT-T was specific to their needs, that the therapist was fair but firm, and that treatment had a positive effect on their overall quality of life and eating behaviours (Hoskins et al., 2019). However, some negative aspects of CBT-T were found, with participants reporting issues with timings of sessions and wanting more than ten sessions.

The present review aimed to summarise and critically evaluate the available literature examining the efficacy and effectiveness of CBT-T for non-underweight eating disorders. Since the current review was prospectively registered, a systematic review and meta-analysis of CBT-T for eating disorders has been published (Keegan et al., 2022), though no narrative synthesis was conducted. The meta-analysis found medium to large effect sizes for eating disorder psychopathology, psychosocial impairment, depression, anxiety, and weekly frequencies of vomiting and objective binge eating. At follow-up, eating disorder psychopathology continued to be below the norm of a non-clinical sample of women (Mond et al., 2006). Although these findings are informative for the effect of CBT-T on a range of outcomes, significant heterogeneity was found in five meta-analyses conducted, which limits interpretation of meta-analytic results (Imrey, 2020). Therefore, as noted by Keegan and colleagues, the results should be interpreted with a degree of caution given this violates one of the assumptions of meta-analysis (Higgins & Thompson, 2002).

Given the above systematic review and meta-analysis had some limitations and a narrative synthesis was not provided, this review aimed to further contribute to understanding the efficacy and effectiveness of CBT-T with a narrative synthesis of results from the available data. Narrative synthesis is an approach for synthesising findings from numerous studies relying mainly on text to summarise findings (Popay et al., 2006). It allows the researchers to explore differences in study findings while taking into account the quality of evidence (Lisy & Porritt, 2016). This detailed and varied approach to synthesising data would provide useful insight given the novelty of CBT-T as an intervention.

The specific aims of the present systematic review were to build on the meta-analysis previously published by Keegan et al. (2022) by evaluating the effect of CBT-T at various time points, on specific eating disorder psychopathologies, against comparator treatments results, and remission and abstinence rates. This review also provides the first independent systematic review of CBT-T, as two of the authors of the previous review are CBT-T co-developers. The review and narrative synthesis aimed to:

1. Determine the effect of CBT-T on eating disorder symptomology and related impairment at pre-treatment, mid-treatment, post-treatment and follow-up
2. Determine the effect of CBT-T on co-morbid difficulties at pre-treatment, mid-treatment, post-treatment and follow-up
3. Synthesise attrition, remission and abstinence rates of CBT-T and comparator treatments, where applicable

Method

This systematic review was conducted in accordance with the PRISMA 2020 guidelines (Page et al., 2021). The protocol was prospectively published on Prospero (CRD42021286870).

Eligibility Criteria

The following criteria were defined for papers to be included in the review: 1) participants must have a diagnosed or diagnosable eating disorder and/or be receiving treatment for an eating disorder, including AN, BN, BED or OSFED during the time of the study; 2) participants must have undergone manualised CBT-T (Waller et al., 2019) during the course of the study; 3) published articles in an English-language peer-reviewed journal; 4) reported outcomes of interest regarding eating disorder symptoms (such as formal outcome measures and frequency of disordered eating), with at least pre- and post-treatment outcomes; 5) intervention studies, with any study design (including randomised, non-randomised, cohort studies, case-controls, cross-sectional and case series designs); 6) studies offering quantitative outcome data; 7) studies with CBT-T with either a comparator or no comparator; 8) studies conducted in all settings; 9) participants can be of any age. The following criteria were defined for papers to be excluded: 1) participants with feeding disorders or an eating disorder which does not have weight/shape concerns, such as avoidant restrictive food intake disorder (ARFID); 2) studies with a CBT intervention for eating disorders which is not formal, manualised CBT-T; 3) the study is in the form of a case study, letter, poster, commentary book or book chapter; 4) the full text was unavailable, as an abstract was unlikely to provide sufficient detail; 5) studies offering qualitative data relating to CBT-T.

Search Strategy

The search strategy was designed to identify all papers reporting on the efficacy or effectiveness of CBT-T for people with eating disorders. Literature searches were conducted using MEDLINE, EMBASE, PsycINFO, Scopus and ProQuest Applied Social Sciences Index and Abstracts (Education Collection, Social Science Database and Sociology Collection) databases using combinations of the following search terms: "10-session* cognitive behavi* therap*" or "ten-session* cognitive behavi* therap*" or "brief cognitive behavi* therap*" or "CBT-T"

or "cognitive behavi* therap* for eating disorder*" AND "eating disorder*" or "anorexia nervosa" or "bulimia nervosa" or "binge eating" or "disordered eating". No filters or limits were used. The search was completed in March 2022 and re-run in May 2023. The updated search used the same strategy but with a date filter applied from the date of the initial search.

Selection of Studies

After conducting the initial searches, duplicates were removed, and the remaining titles and abstracts were screened. Full texts of the papers were screened for eligibility before achieving an agreement for the included papers. The lead reviewer (AP) and co-reviewer (MZ) screened papers independently at all stages (except for the rerun of searches). COVIDENCE, an online software tool for managing and screening citations that allows collaboration between team members, was used for the data screening process.

Data Extraction

Relevant data were extracted from the included studies and grouped into summary tables to enable comparisons of study characteristics, participant characteristics and study results. Study characteristics extracted included: study design, setting, country, funding, inclusion criteria, exclusion criteria, sample size, attrition rates, intervention received, follow-up periods and statistical analyses (see Table 1). For participant characteristics, the gender, age range, ethnicity and type of eating disorder were extracted (see Table 2). Study results extracted were type of outcome and how it was measured, and outcomes relating to: eating disorder psychopathology, disordered eating behaviours, psychosocial impairment related to eating disorder features, depression and anxiety symptoms, attrition, remission, and abstinence rates (see Table 3). Where studies met inclusion criteria but not all information was included in the paper, authors were contacted. Data were extracted to the tables by the lead reviewer (AP) and reviewed with the co-author (EN) for accuracy and relevance.

Data Analysis and Synthesis

Due to concerns about diversity and heterogeneity of study characteristics (sample sizes, study designs and use of controls groups), a meta-analysis was considered unsuitable. Heterogeneity poses a challenge to interpreting meta-analysis (Ioannidis, 2008) and where meta-analysis is not seen as appropriate, alternative approaches to synthesising results should be explored (McKenzie & Brennan, 2019). A narrative synthesis was conducted to provide a detailed synthesis of the results by outcome, following guidelines by Campbell et al. (2020).

Table 1 Characteristics of included studies

Author, year	Study Design; Setting; Country; Funding; Intervention	Participants Inclusion criteria; Exclusion criteria	Sample Size; Attrition	Follow-up	Analyses
Moore et al. (2021)	Open label pre–post trial/case series Outpatient NHS setting UK No specific grant funding CBT-T	Inclusion: DSM-5 criteria for BED Exclusion: low weight BMI (< 17.5), purging or laxative use during therapy or over the month preceding therapy, self-harm or active suicidality	$N = 53$ Attrition: $n = 12$ (22.64%)	10 weeks (post-treatment at final session) Three-month follow-up	Intent-to-treat (ITT) analyses with paired t-tests. 53 included in analysis, multiple imputations used to correct for missing data
Pellizzer et al. (2019a)	Case series design Outpatient university setting Australia Funding not reported CBT-T	Inclusion criteria not reported Exclusion: severe physical and/or mental health condition, already receiving psychological therapy for eating disorder, difficulty understanding/ speaking English	$N = 52$ Attrition: $n = 20$ (38.46%)	10 weeks (post-treatment at final session) One-month follow-up Three-month follow-up	Multilevel modelling using completer and ITT analyses – 32 for completer analysis and 52 for ITT analysis. Within-group effect sizes (Cohen's *d*)
Pellizzer et al. (2019b)	Case series design Outpatient setting Australia No funding received CBT-T	Inclusion: BMI > 17.5 Exclusion: severe physical/ mental health condition which would interfere with treatment, currently receiving psychological therapy for an eating disorder, difficulty speaking/understanding English	$N = 26$ Attrition: $n = 13$ (50%)	10 weeks (post-treatment at final session) One month follow-up Three-month follow-up	Completer and ITT analyses with multi-level modelling to manage missing data. Effect sizes for within-group comparisons (Cohen's *d)*
Pellizzer et al. (2019c)	Case series design Outpatient setting Australia Funding not reported CBT-T	Inclusion: started treatment and reported disordered eating behaviours week preceding baseline assessment Exclusion criteria not reported	$N = 62$ Attrition: $n = 23$ (36.51%)	10 weeks (post-treatment at final session) Three-month follow-up	62 included in analysis (one removed due to missing data). Linear regression for predictor variables. ITT approach for outcome variables and time points

Table 1 (continued)

Author, year	Study Design; Setting; Country; Funding; Intervention	Participants Inclusion criteria; Exclusion criteria	Sample Size; Attrition	Follow-up	Analyses
Rose et al. (2021)	Case series design Outpatient NHS clinic UK Funding not reported CBT-T	Inclusion: diagnosis of BN or atypical AN, no previous eating disorder treatment, compliance with physical health monitoring, medically stable, no co-morbid severe mental health problem, no problematic alcohol or substance use, no recent moderate/severe self-harm, BMI > 18.5 Further exclusion criteria not reported	$N = 40$ Attrition: $n = 14$ (35%)	10 weeks (post-treatment at final session)	Pre to post treatment change examined using mixed models to analyse treatment scores (pre and post) and interactions with duration of eating disorder
Tatham et al. (2020)	Cohort comparison NHS outpatient setting UK Funding not reported CBT-T vs CBT-E	Inclusion: adults > 18 years, BMI > 18.5 Allocation of treatment group based on mental health and medical risk: those with higher risk and lower weight allocated to CBT-E	$N = 193$ CBT-E $n = 138$; CBT-T $n = 55$ CBT-E attrition: $n = 86$ (62.32%); CBT-T attrition: $n = 24$ (47.3%)	10 weeks (post-treatment at final session) Six-month follow-up	Outcomes compared using completer and ITT analyses. Completer analyses used repeated measures ANOVAs with partial eta^2 effect sizes and post hoc Least Significant Difference (LSD) tests ITT analyses with multiple imputation, paired t-tests for within groups score comparisons at different time points (effect sizes Cohen's *d*)

Table 1 (continued)

Author, year	Study Design; Setting; Country; Funding; Intervention	Participants Inclusion criteria; Exclusion criteria	Sample Size; Attrition	Follow-up	Analyses
Wade et al. (2021)	RCT University outpatient eating disorder service Australia Supported by Clinical College of Australian Psychological Society CBT-T vs CBTm	Inclusion: BMI > 17.5, > 15 years old, diagnosis of eating disorder, consent for service to liaise with GP and ability to commit to therapy Exclusion: current rapid weight loss, reported plans for suicide, evidence of substance dependence or active psychosis, receiving psychological therapy for eating disorder, difficulty speaking/understanding English	*N* = 98 CBT-T: *n* = 46 allocated CBTm: *n* = 52 CBT-T attrition: *n* = 20 (43.48%) CBTm attrition: *n* = 23 (44.23%)	10 weeks (post-treatment at final session) One-month follow-up Three-month follow-up	Linear mixed-model (LMM) analyses used to assess effectiveness of each intervention on continuous outcomes using ITT analysis. Within-group effect sizes calculated at end of treatment and follow-ups. Least-squares post-hoc comparisons used due to power constraints
Waller et al. (2018)	Case series design NHS outpatient setting UK No external funding was received CBT-T	Inclusion: > 18 years old, BMI > 18, diagnosed with an eating disorder Exclusion: physical risk, active suicidality, or an inability to undertake therapy due to learning disability or limited English language skills	*N* = 93 Attrition: *n* = 29 (31.18%)	10 weeks (post-treatment at final session) Three-month follow-up	ITT methods multiple imputations used for missing data. Repeated measures ANOVAs with post hoc Least Significant Difference (LSD) tests to determine pairwise differences used for all outcomes, (depression and anxiety outcomes not collected at follow-up)

Table 2 Participant characteristics of included studies

Author, year	Gender	Age (Years)	Ethnicity	Diagnosis
Moore et al. (2021)	77% female; 21% male; 2% transgender	Not reported	Not reported	BED
Pellizzer et al. (2019a)	90.4% female	Range: 15—68 Mean: 26.42 (SD = 9.62)	82.7% White	BN; OSFED; AN; BED
Pellizzer et al. (2019b)	96.2% female	Range: 16—51 Mean: 28.73 (SD = 9.57)	100% White	Not reported
Pellizzer et al. (2019c)	91.9% female	Range: 15—68 Mean: 27.37 (SD = 9.77)	87.1% White	BN; OSFED
Rose et al. (2021)	90% female	Range: 18—51 Median: 26	90% British; 5% White European; 5% Mixed White and Asian	BN; OSFED
Tatham et al. (2020)	Not reported	CBT-E: Mean: 31.5 (SD = 12.4) CBT-T: Mean: 29.4 (SD = 10.2)	Not reported	Atypical AN ($n = 45$); BN ($n = 86$); Atypical BN ($n = 38$); BED ($n = 24$)
Wade et al. (2021)	CBT-T: 91% female CBTm: 94% female	Range not reported CBT-T: Mean: 26.91 (SD = 10.88) CBTm: Mean: 25.77 (SD = 7.45)	Not reported	AN ($n = 5$); BN ($n = 68$); BED ($n = 5$); OSFED ($n = 20$)
Waller et al. (2018)	98% female; 2% male	Range: 18—57 Mean: 27.4 (SD = 8.66)	Not reported	BN ($n = 51$); BED ($n = 25$); OSFED ($n = 17$)

All information available is presented in the table. Anorexia nervosa (AN), bulimia nervosa (BN), binge eating disorder (BED) and other specific feeding or eating disorder (OSFED). Studies which reported the number of participants with each diagnosis are included. Standard deviation is abbreviated to SD

Table 3 Results of included studies

Author, year	Outcomes	Eating disorder psychopathology and disordered eating behaviours	Clinical impairment and depression and anxiety	Abstinence and remission
Moore et al. (2021)	Eating disorder psychopathology—EDE-Q Depression—PHQ-9 Anxiety—GAD-7 Weekly frequency of objective binge eating (food diaries)	Psychopathology: Global score pre- to mid-treatment: $d=0.93$ Global score pre- to post-treatment: $d=1.23$ Pre- to mid-treatment changes in: Restraint ($d=0.72$), Eating Concern ($d=0.65$), Weight Concern ($d=0.68$) and Shape Concern ($d=0.45$) Pre- to post-treatment changes in: Restraint ($d=0.83$), Eating Concern ($d=1.29$), Shape Concern ($d=0.92$). and Weight Concern ($d=1.14$) No effect sizes for follow-up Disordered Behaviours: Binge eating frequency: pre- to mid-treatment: $d=1.16$; pre- to post-treatment: $d=1.28$ Changes sustained at follow-up (no effect sizes reported)	Clinical Impairment: Not applicable (N/A) Depression: Pre- to mid-treatment ($d=0.50$), pre- to post-treatment ($d=0.82$), post-treatment to follow-up ($d=0.37$) Anxiety: Pre- to mid-treatment ($d=0.44$), pre- to post-treatment ($d=0.55$), not available for post- to follow-up	Remission: Defined as global EDE-Q score below 2.77 at final session. 46 participants (87.2%) below the 2.77 EDE-Q cut-off score at end of treatment and 50 participants (94.3%) met at follow-up 'Clinically significant change' (CSC index; Jacobson & Truax, 1991) in EDE-Q global with reduction > 1.70. 25 participants (47.6%) met criterion by end of treatment, 33 participants (61.5%) met at follow-up Reliable Change Index (EDE-Q Global reduction ≥ 1.38): 33 participants (62.4%) met at end of treatment, 35 participants met (66%) at follow-up
Pellizzer et al. (2019a)	Eating disorder psychopathology – EDE-Q (global score only) Clinical impairment – CIA Negative affect – DASS-21 Weekly frequency of disordered eating (food diaries)	Psychopathology: Global score pre- to mid-treatment: $d=1.19$ Global score pre- to post-treatment: $d=1.96$ Changes sustained at one-month follow-up ($d=1.99$) and three-month follow-up ($d=1.92$) Disordered Behaviours: Binge eating frequency pre- to mid-treatment ($d=1.06$), and purging frequency pre- to mid-treatment ($d=0.57$) Binge eating frequency post-treatment ($d=1.02$) and purging frequency post-treatment ($d=0.55$) Binge eating frequency changes at one-month ($d=0.97$) and three-month ($d=0.94$) follow-up Purging changes at one-month follow-up ($d=0.49$) and three-month follow-up ($d=0.52$)	Clinical Impairment: Changes at: mid-treatment ($d=0.98$), post-treatment ($d=1.62$), one-month follow-up ($d=1.67$) and three-month follow-up ($d=1.62$) Negative Affect: Pre- to post-treatment ($d=0.59$) Negative affect changes at one-month follow-up ($d=0.74$) and three-month follow-up ($d=0.72$)	Abstinence: Defined as free of all disordered eating behaviours, purging and objective bingeing over past month. Abstinence rates: 38.5% at end of treatment, 44.2% one-month follow-up, 48.1% at three-month follow-up Remission: Defined as EDE-Q global score no greater than one standard deviation above community mean (< 2.77) using Australian norms (Mond et al., 2006). Remission rates: 32.5% at end of treatment, 34.6% at one-month follow-up, 42.3% at three-month follow-up

Table 3 (continued)

Author, year	Outcomes	Eating disorder psychopathology and disordered eating behaviours	Clinical impairment and depression and anxiety	Abstinence and remission
Pellizzer et al. (2019b)	Eating disorder psychopathology – EDE-Q Clinical impairment – CIA Negative affect – DASS-21 Weekly frequency of disordered eating behaviours (food diaries)	Psychopathology: Global score change pre- to mid-treatment, $d=1.27$, and post-treatment, $d=1.63$. Sustained at one-month ($d=2.22$) and three-month ($d=2.34$) follow-up At mid-treatment: Restraint ($d=1.27$), Eating Concern ($d=1.48$), Shape Concern ($d=0.75$) and Weight Concern ($d=0.54$) At post-treatment: Restraint ($d=1.63$), Eating Concern ($d=2.44$), Shape Concern ($d=1.58$), Weight Concern ($d=1.55$) At one month follow-up: Restraint ($d=1.61$), Eating Concern ($d=2.39$), Shape Concern ($d=1.50$) Weight Concern ($d=1.43$); and three month follow-up: Restraint ($d=1.40$), Eating Concern ($d=2.71$), Shape Concern ($d=1.77$), Weight Concern ($d=1.40$) Disordered Behaviours: Binge eating reduction at mid-treatment ($d=0.91$), post-treatment ($d=0.89$), one-month ($d=0.87$) and three-month ($d=0.83$) follow-up Purging reduction at mid-treatment ($d=0.57$), post-treatment ($d=0.58$), one-month ($d=0.57$) and three-month ($d=0.54$) follow-up	Clinical Impairment: Score reduced at mid-treatment ($d=1.28$) and post-treatment ($d=2.08$). Sustained at one-month ($d=1.92$) and three-month ($d=2.04$) follow-up Negative Affect: Changed at mid-treatment ($d=0.44$) and post-treatment ($d=1.04$). Sustained at one-month ($d=1.06$) and three-month ($d=0.97$) follow-up	Abstinence: Defined as no disordered eating behaviours over past 28 days. Abstinence rates: 44% at post-treatment, 36% at one-month follow-up, 36% at three-month follow-up Remission: Defined as EDE-Q global score no greater than one standard deviation above community mean (<2.77) using Australian norms (Mond et al., 2006). Remission rate 28% at post-treatment, 20% at one-month follow-up, 24% at three-month follow-up
Pellizzer et al. (2019c)	Eating disorder psychopathology – EDE-Q (global score only) Clinical impairment – CIA	Psychopathology: Global score reduction pre- to post-treatment ($d=2.38$) Post-treatment to follow-up ($d=0.14$) Disordered Behaviours: N/A	Clinical Impairment: Score pre- to post-treatment ($d=2.54$). Post-treatment to follow-up ($d=0.19$) Depression and Anxiety: N/A	N/A

Table 3 (continued)

Author, year	Outcomes	Eating disorder psychopathology and disordered eating behaviours	Clinical impairment and depression and anxiety	Abstinence and remission
Rose et al. (2021)	Eating disorder psychopathology – EDE-Q (global effect size only) Clinical impairment – CIA Frequency of binge eating, vomiting and laxative use over previous seven and 28 days (from EDE-Q and ED-15)	Psychopathology: Global score pre-treatment to post-treatment (r = 0.86) Disordered Behaviours: Abstinence rates of completers from binge eating/purging over the final 28-days: 30.1%, and 7-days: 73.1%	Clinical Impairment: Score pre- to post-treatment (r = 0.78) Depression and Anxiety: N/A	Abstinence: Defined as binge eating and purging abstinence over seven- and 28-day periods (see Disordered Behaviours column) Remission: Defined as post-treatment global EDE-Q score < standard deviation above the community mean in adult females, < 2.77 (Fairburn et al., 2004). 76.9% met this criterion Remission also defined as above criterion plus 28-day binge eating and purging abstinence: reported for 23.1%
Tatham et al. (2020)	Eating disorder psychopathology – EDE-Q (global score only) Clinical impairment – CIA	Psychopathology: CBT-E: global score pre- to mid-treatment (d = 0.39), pre- to post-treatment (d = 1.44), post-treatment to follow-up (d = 0.06) CBT-T: global score pre- to mid-treatment (d = 0.44), pre- to post-treatment (d = 1.26), post-treatment to follow-up (d = 0.03) Disordered Behaviours: N/A	Clinical Impairment: CBT-E: score pre- to post-treatment (d = 1.36). Post-treatment to follow-up (d = 0.54) CBT-T: score pre- to post-treatment (d = 0.92). Post-treatment to follow-up (d = 0.41) Depression and Anxiety: N/A	Remission: Defined as decrease in EDE-Q global scores from above to below cut-off (2.77, Turner et al., 2015a, b). End of treatment rates of 61.2% for CBT-E and 58.6% for CBT-T. Follow up rates of 58.6% for CBT-E and 59.3% for CBT-T

Table 3 (continued)

Author, year	Outcomes	Eating disorder psychopathology and disordered eating behaviours	Clinical impairment and depression and anxiety	Abstinence and remission
Wade et al. (2021)	Eating disorder psychopathology – EDE-Q (global score only) Disordered eating behaviours – ED-15 (objective binge episodes, self-induced vomiting episodes, laxative abuse, and/or driven exercise) Clinical impairment – CIA Negative affect—DASS-21	Psychopathology: CBT-T: global score change from pre-treatment to: mid-treatment ($d=1.05$), post-treatment ($d=1.75$), one-month follow-up ($d=2.25$) and three-month follow-up ($d=1.80$) CBTm: global score changes from pre-treatment to: mid-treatment ($d=0.95$), post-treatment ($d=1.88$), one-month follow-up ($d=2.42$) and three-month follow-up ($d=2.17$) Disordered Behaviours: CBT-T: binge eating change from pre-treatment to: mid-treatment ($d=0.60$), post-treatment ($d=0.78$), one-month follow-up ($d=0.77$) and three-month follow-up ($d=0.69$); Vomiting change from pre-treatment to: mid-treatment ($d=0.34$), post-treatment ($d=0.43$), one-month follow-up ($d=0.40$) and three-month follow-up ($d=0.43$); Laxative use change from pre-treatment to: mid-treatment ($d=0.03$), post-treatment ($d=0.29$), one-month follow-up ($d=0.29$) and three-month follow-up ($d=0.29$); Driven exercise change from pre-treatment to: mid-treatment ($d=0.13$), post-treatment ($d=0.19$), one-month follow-up ($d=0.14$) and three-month follow-up ($d=0.14$) CBTm: binge eating change from pre-treatment to: mid-treatment ($d=0.68$), post-treatment ($d=0.91$), one-month follow-up ($d=0.95$) and three-month follow-up ($d=0.93$); Vomiting changes pre-treatment to: mid-treatment ($d=0.47$), post-treatment ($d=0.60$), one-month follow-up ($d=0.63$) and three-month follow-up ($d=0.61$); Laxative use changes from pre-treatment to: mid-treatment ($d=0.25$), post-treatment ($d=0.37$), one-month follow-up ($d=0.38$) and three-month follow-up ($d=0.37$); Driven exercise changes from pre-treatment to: mid-treatment ($d=0.16$), post-treatment ($d=0.18$), one-month follow-up ($d=0.15$) and three-month follow-up ($d=0.19$)	Clinical Impairment: CBT-T: score reduced from pre-treatment to: mid-treatment ($d=0.83$), post-treatment ($d=1.73$), one-month follow-up ($d=2.24$) and three-month follow-up ($d=1.84$) CBTm: score reduced from pre-treatment to: mid-treatment ($d=0.81$), post-treatment ($d=2.00$), one-month follow-up ($d=2.66$) and three-month follow-up ($d=2.06$) Depression and Anxiety: CBT-T: score reduced from pre-treatment to: mid-treatment ($d=0.32$), post-treatment ($d=0.81$), one-month follow-up ($d=1.11$) and three-month follow-up ($d=1.05$) CBTm: score reduced from pre-treatment to: mid-treatment ($d=0.5$), post-treatment ($d=1.08$), one-month follow-up ($d=1.19$) and three-month follow-up ($d=1.19$)	Remission: Defined at the last follow-up with BMI > 18.5, no disordered eating behaviours (over previous 28 days using EDE-Q), normative levels of psychopathology in last month (cut-off of one standard deviation from community Australian norms for EDE-Q global score (< 2.77, Mond et al., 2006) Remission achieved in 51% completers, 38% in CBT-T group and 64% in CBTm group

Table 3 (continued)

Author, year	Outcomes	Eating disorder psychopathology and disordered eating behaviours	Clinical impairment and depression and anxiety	Abstinence and remission
Waller et al. (2018)	Eating disorder psychopathology—EDE-Q Depression—PHQ-9 Anxiety—GAD-7	Psychopathology: Substantial reductions for global score and subscales from pre- to post-treatment Global score: $F(3,90)=60.5$, $p=0.001$, $\eta_p^2=0.668$ Restraint: $F(3,90)=51.1$, $p=0.001$, $\eta_p^2=0.630$ Eating Concern: $F(3,90)=56.0$, $p=0.001$, $\eta_p^2=0.651$ Shape Concern: $F(3,90)=58.7$, $p=0.001$, $\eta_p^2=0.662$ Weight Concern: $F(3,90)=41.2$, $p=0.001$, $\eta_p^2=0.578$ Disordered Behaviours: Substantial reductions in frequency of all pre- to post-treatment: Objective binges: $F(3,90)=27.2$, $p=0.001$, $\eta_{p_2}^2=0.476$; Vomiting: $F(3,90)=21.0$, $p=0.001$, $\eta_{p_2}^2=0.402$; Laxative use: $F(3,90)=13.4$, $p=0.001$, $\eta_p^2=0.308$	Clinical Impairment: N/A Depression and Anxiety: Changed substantially pre- to post-treatment Depression: $F(3,90)=46.3$, $p=0.001$. $\eta_p^2=0.502$ Anxiety: $F(3,90)=10.2$, $p=0.001$, $\eta_p^2=0.181$	Abstinence: Defined as free of disordered eating behaviours over past two months or past week. End of treatment abstinence rate of 67.2% (free of disordered eating behaviours over previous week) for completers, 59.1% for ITT analysis. Follow-up abstinence rate of 42.8% for completers, and 41.9% for ITT analysis Remission: Defined as abstinence (as above) and EDE-Q global score no more than one standard deviation above norm for British non-clinical females (< 2.77). End of treatment remission rate 50% for completers and 40.2% for ITT sample. Follow up remission rate of 37.1% for completers and 36.6% for ITT analysis

For studies which offered both intent-to-treat and completer analysis data, intent-to-treat data has been extracted for the purpose of the review: Moore et al. (2021), Pellizzer et al., (2019a, b), Wade et al. (2021) and Waller et al. (2018). Effect sizes were calculated for the following studies from means and standard deviations using GPower (Faul et al., 2007): Pellizzer et al. (2019c) and Wade et al. (2021). Only outcome and analyses of interest relevant to the review are included in the table. Full names for measures are: Eating Disorder Examination Questionnaire (EDE-Q; Fairburn & Beglin, 2008), Clinical Impairment Assessment Questionnaire (CIA; Bohn & Fairburn, 2008), Depression, Anxiety and Stress Scale – 21 (DASS-21; Lovibond & Lovibond, 1995), Generalised Anxiety Disorder Questionnaire (GAD-7; Spitzer et al., 2006), Patient Health Questionnaire (PHQ-9; Kroenke et al., 2001) and Eating Disorder-15 (ED-15; Tatham et al., 2015). The GSH intervention, CBTm, in the Wade et al. (2021) study was developed based on self-help materials (Cooper, 1993; Cooper et al., 2001), with two sessions added to have matched session numbers to CBT-T. CBTm focuses on open weighing, psychoeducation, regular eating, cognitive challenging of eating disorder beliefs and problem solving, along with motivational work and developing a psychological formulation at the start of treatment

Quality Assessment

The methodological quality of studies was assessed using the Effective Public Health Practice Project (EPHPP) quality assessment tool (Thomas et al., 2004). This tool evaluates eight quality components for both randomised and non-randomised quantitative studies: Selection Bias, Study Design, Confounders, Blinding, Data Collection Methods, Withdrawals or Dropouts, Intervention Integrity and Analyses. A rating of 'strong', 'moderate' or 'weak' based on the scoring method recommended by the assessment tool was assigned to each category and a global rating was calculated based on the frequency of weak ratings across these components, except for Intervention Integrity and Analyses. The methodological quality was determined by the lead reviewer (AP) and a sub-selection of papers (50%) were randomly selected, using an online random number generator, and independently rated by a co-reviewer (MZ). Decisions were compared and discussed by both reviewers to achieve a consensus. Inter-rater reliability between reviewers was measured using Cohen's kappa (κ) statistic. Inter-rater reliability for quality ratings was found to be $k = 0.68$, $p < 0.001$ indicating 'moderate' reliability (McHugh, 2012). There was 75% agreement for the overall quality scores which is considered 'acceptable' (Stemler, 2004).

Effect Size Reporting

Effect sizes were calculated and interpreted using Cohen's (1988) benchmarks. One study did not provide effect sizes for all outcomes in the paper (Wade et al., 2021) and the lead author was contacted to request outcome data, which was provided. Another study (Pellizzer et al., 2019c) reported continuous outcomes in the paper, but did not calculate effect sizes. For both studies, effect sizes were calculated from means and standard deviations using GPower 3.1 (Faul et al., 2007).

Results

Searches

Initially 259 papers were found through the systematic literature search. After duplicates were removed, 156 papers were screened for inclusion against eligibility criteria (see Fig. 1 for PRISMA flowchart). Titles and abstracts of each of these were screened by the lead reviewer (AP) and co-reviewer (MZ), with 92.95% agreement, and conflicts were resolved by discussion. Inter-rater reliability for abstract and title screening was found to be $k = 0.62$, $p < 0.001$ ('moderate' reliability; McHugh, 2012). This led to 142 papers being excluded. 14 papers were then screened in full by the lead reviewer and co-reviewer, with 92.86% agreement and one conflict was resolved by discussion. Inter-rater reliability for full text screening was found to be $k = 0.85$, $p = 0.001$ ('strong' reliability;

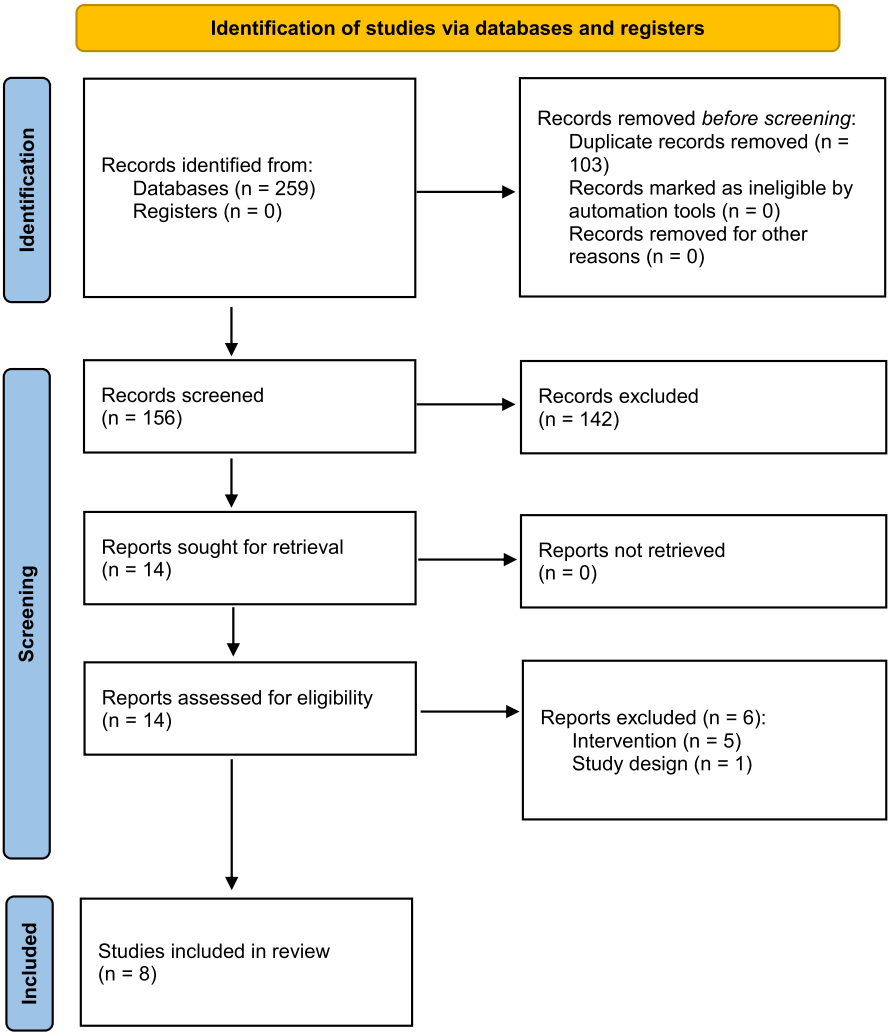

Fig. 1 PRISMA 2020 flowchart

McHugh, 2012). Five papers were excluded as the interventions used did not meet the inclusion criteria and one paper was excluded as its design did not meet the inclusion criteria. One paper (Pellizzer et al., 2019c) was a secondary analysis using a subset of two samples combined from previous studies (Pellizzer et al., 2019a, b). Whilst the sample was not completely independent from samples in other included papers, reviewers decided to include this paper as it reported novel results from only participants with disordered eating behaviours the week preceding baseline assessment. Searches were rerun by the lead reviewer in May 2023 which did not identify any further studies meeting inclusion criteria. This led to eight papers being included in the review.

Description of Studies

Of the eight papers included in this review, one described an RCT, one described a non-randomised comparison, and six were case series (see Table 1). Sample sizes ranged from 26 to 193 (total $N = 555$) and a full range of eating disorder diagnoses were represented (see Table 2). All but one study (Rose et al., 2021) included a follow-up period; the longest follow-up was six months (Tatham et al., 2020). All were conducted in outpatient settings and all but one study (Rose et al., 2021) reported intent-to-treat (ITT) analyses, which have been included in the synthesis (rather than completer analysis). All studies except one (Tatham et al., 2020) reported the gender of samples, in which the majority were female (> 90%). Two studies utilised comparator groups, standard-length CBT-ED (CBT-E; Tatham et al., 2020) and GSH (Wade et al., 2021), which are the current recommended treatments for non-underweight eating disorders (NES, 2014; NICE, 2017).

Results and effect sizes from the studies are displayed by outcome category in Table 3. Remission and abstinence results are grouped into categories, according to definition used in the study. Outcomes for statistical tests and effect sizes from the original papers are reported where available.

Quality Assessment

Quality appraisals are presented in Table 4. Seven studies were rated as 'weak' overall and one as 'moderate'. Strengths across studies included use of reliable and valid outcome measures (Data Collection Methods) and Appropriate Statistical Analyses (completer and ITT analyses were reported in all but one study; Rose et al., 2021). Samples were somewhat likely to be representative of the target population and the level of participation from individuals selected was relatively high (Selection Bias). Most did not describe blinding procedures (blinding of therapists to exposure status and intervention, and participants to the research question) and guidance suggests a rating of 'moderate' in such cases.

Weaknesses were Study Design, given that most were case series, and control for confounders was generally not described. Withdrawals and Dropouts ratings were almost all 'weak', as dropout rate at follow-up was high (< 60% completing the study) or these were not adequately described. The percentage of participants who received the allocated intervention of interest (Intervention Integrity) varied: 80–100% (Waller et al., 2018); 60–79% (Moore et al., 2021; Pellizzer et al., 2019a, c; Rose et al., 2021; Wade et al., 2021); less than 60% (Pellizzer et al., 2019b; Tatham et al., 2020). Only two studies monitored consistency of intervention delivery (Rose et al., 2021; Wade et al., 2021). It was unclear across studies if participants received a co-intervention (such as psychotropic medication or dietetic input). Four studies did not exclude participants already receiving psychological therapy (Moore et al., 2021; Rose et al., 2021; Tatham et al., 2020; Waller et al., 2018).

Table 4 Methodological quality of included studies

Author, year	Selection bias	Study design	Confounders	Blinding	Data collection methods	Withdrawal & dropouts	Overall rating
Moore et al. (2021)	Moderate	Weak	Weak	Moderate	Strong	Moderate	Weak
Pellizzer et al. (2019a)	Weak	Weak	Weak	Moderate	Strong	Moderate	Weak
Pellizzer et al. (2019b)	Moderate	Weak	Weak	Moderate	Strong	Weak	Weak
Pellizzer et al. (2019c)	Weak	Weak	Weak	Moderate	Strong	Moderate	Weak
Rose et al. (2021)	Moderate	Weak	Weak	Moderate	Strong	Moderate	Weak
Tatham et al. (2020)	Moderate	Moderate	Weak	Moderate	Strong	Weak	Weak
Wade et al. (2021)	Moderate	Strong	Weak	Moderate	Strong	Moderate	Moderate
Waller et al. (2018)	Moderate	Weak	Weak	Moderate	Strong	Moderate	Weak

Overall quality ratings were derived following tool guidance: 'Strong' if there were no 'weak' ratings, 'Moderate' if there was one 'weak' rating and 'Weak' if there were two or more 'weak' ratings

Attrition

Treatment attrition ranged from 23 to 50% of the total samples. Of the two studies which had comparison treatment groups, CBT-T attrition rates were lower than the comparison groups of CBT-E (Tatham et al., 2020) and GSH (Wade et al., 2021). Only one of the comparator studies explored between-group predictors of attrition (Tatham et al., 2020) and reported that participants with a higher BMI were more likely to achieve treatment completion.

Three of the studies without comparators explored predictors of attrition (Pellizzer et al., 2019a, b; Waller et al., 2018). Pellizzer et al. (2019a) found that purging was the only significant predictor of attrition for patients who decided collaboratively with the therapist to leave treatment. Pellizzer et al. (2019b) found no significant predictors of attrition. Waller et al. (2018) found no associations between drop-out and diagnosis during treatment or follow-up, but reported that drop-out was less likely among patients who had higher anxiety levels.

Abstinence

Four studies reported abstinence rates. Two defined abstinence as cessation of disordered eating behaviours over the past seven days (Rose et al., 2021; Waller et al., 2018), reporting abstinence for 73.1% participants (Rose et al., 2021), and 59.1% for the ITT sample (Waller et al., 2018). Waller et al. (2018) also reported a slightly lower abstinence rate of 41.9% in the ITT sample after two months. Three studies (Pellizzer et al., 2019a, b; Rose et al., 2021) defined abstinence more stringently, as no disordered eating behaviours over the past month. By this metric, rates were lower and ranged between 30.1% and 44% post-treatment (Pellizzer et al., 2019a, b; Rose et al., 2021), while at one-month follow-up rates were 36% and 44.2%, and remained similar at three months (Pellizzer et al., 2019a, b).

Remission

Five studies reported remission rates using a comprehensive and stringent definition of global EDE-Q score one standard deviation above the community mean in adult females (cut-off score of 2.77; Fairburn & Beglin, 1994; Mond et al., 2006). Using this criterion, remission rates ranged from 28% to 87.2% of the total samples at the end of treatment. Remission rates at one-month follow-up were only provided by two of the studies which were 34.6% (Pellizzer et al., 2019a) and 20% (Pellizzer et al., 2019b), while at three-month follow-up rates were similar to end of treatment, ranging between 24% and 94.3% (based on four studies). The longest follow-up was six months (Tatham et al., 2020) which found similar rates at around 59% for CBT-T and CBT-E. There was no discernible pattern with patient diagnosis and remission rates.

More stringent definitions of remission were used in three studies, requiring abstinence from disordered eating as well as score below the eating psychopathology

norm, associated with lower rates (Rose et al., 2021; Wade et al., 2021; Waller et al., 2018; see Table 3). By Wade et al. (2021) criteria, CBT-T remission rate was 38%, which was lower than the GSH comparator (64%).

Finally, Moore et al. (2021) also reported clinically significant change (a reduction in EDE-Q global score above 1.70); 47.6% met this criterion at the end of therapy and 61.5% at three-month follow-up. A reliable change index was also calculated (defined as EDE-Q global score reduction above 1.38); 62.4% met this criterion at the end of treatment, which remained similar at three-month follow-up.

In sum, remission rates for CBT-T varied by definition and follow-up time, but based on the limited evidence, CBT-T had comparable remission rates to standard length CBT for eating disorders (CBT-E) and lower remission rates than GSH.

Eating Disorder Psychopathology

All studies measured changes in eating disorder psychopathology using the Eating Disorder Examination Questionnaire (EDE-Q; Fairburn & Beglin, 2008). All reported significant reductions in global eating disorder psychopathology corresponding with large effects at mid-treatment and end of treatment (except for one study which had a small effect size at mid-treatment; Tatham et al., 2020), including the sample of participants with disordered eating behaviours the week preceding baseline assessment (Pellizzer et al., 2019c). All showed maintenance of effects at one-month, three-month and six-month follow-up.

Of the studies with comparator groups (Tatham et al., 2020; Wade et al., 2021), reductions in global eating psychopathology at all time points were comparable between treatment groups. Significant reductions were found in global eating disorder psychopathology corresponding to large effect sizes at mid-treatment, post-treatment, one-month follow-up and three-month follow-up for both CBT-T and GSH (Wade et al., 2021), with no significant between-group effects at any time point, or interactions between group and time (also the case for all other outcomes). CBT-T and CBT-E showed similar reductions in global eating disorder psychopathology with small effect sizes for both treatments at mid-treatment, but large effect sizes at end of treatment for both treatments (Tatham et al., 2020). Duration of treatment was not associated with the level of change in eating disorder psychopathology for either CBT-T or CBT-E at end of treatment or six-month follow-up.

Three studies (Moore et al., 2021; Pellizzer et al., 2019b; Waller et al., 2018) reported changes in specific features of eating disorder psychopathology using EDE-Q subscales (Restraint, Eating Concern, Shape Concern and Weight Concern; see Table 3). Two reported outcomes at mid-treatment (Moore et al., 2021; Pellizzer et al., 2019b) and found significant reductions in eating disorder psychopathologies with medium and large effects within the first four weeks for all subscales. All three studies reported significant reductions in all eating disorder psychopathology subscales with large effects at end of treatment. One study (Pellizzer et al., 2019b) found that changes in all subscales were sustained at three-month follow-up with large effects.

Thus, the studies suggest that CBT-T reduces eating disorder psychopathology with large effects and CBT-T was comparable to CBT-E and GSH.

Disordered Eating Behaviours

All except for two studies (Pellizzer et al., 2019c; Tatham et al., 2020) reported disordered eating behaviours as an outcome, and found large effects of CBT-T for reducing frequency of objective binge eating episodes over the previous 28 days at end of treatment and follow ups, except Rose et al. (2021). Rose and colleagues did not report effect sizes but found that 30.1% abstained from both binge eating and purging (combined) over 28 days, and 73.1% over the past seven days. From pre-treatment to mid-treatment, effect sizes of CBT-T were large in two of three studies (Moore et al., 2021; Pellizzer et al., 2019a, b), but medium for the other study (Wade et al., 2021).

Four studies (Pellizzer, et al., 2019a, b; Wade et al., 2021; Waller et al., 2018) found CBT-T to have an effect for purging behaviours (including vomiting, laxative use and driven exercise) with small to medium effect sizes in most studies at end of treatment and follow-up. One study found large effect sizes for CBT-T reducing vomiting and laxative use at the end of treatment (Waller et al., 2018). From pre-treatment to mid-treatment, medium effect sizes were observed for purging behaviours (Pellizzer et al., 2019a, b), but small effects for vomiting and for laxative use and driven exercise ($d < 0.2$; Wade et al., 2021).

In the comparison between CBT-T and GSH (Wade et al., 2021), both CBT-T and GSH showed large effect sizes for binge eating behaviours, and small effect sizes for laxative use and driven exercise, at end of treatment, one-month follow-up and three-month follow-up. For vomiting, GSH was found to have medium effect sizes at end of treatment and both follow-ups, whereas CBT-T had small effect sizes for the same time points. At mid-treatment, both treatments had medium effect sizes for binge eating behaviours. There was more variation at mid-treatment: CBT-T had a small effect for vomiting, but GSH had a medium effect. For laxative use, CBT-T effect size, d, was < 0.2, whereas GSH had a small effect size at mid-treatment.

In sum, CBT-T appears to result in large decreases in binge eating behaviour and small to moderate decreases in purging behaviours. CBT-T was mostly comparable to GSH, though GSH was superior for some purging behaviours.

Clinical Impairment Related to Eating Disorder Features

Six studies (Pellizzer et al., 2019a, b, c; Rose et al., 2021; Tatham et al., 2020; Wade et al., 2021) examined the effects of CBT-T on psychosocial impairment due to eating disorder features, measured by the Clinical Impairment Assessment questionnaire (CIA; Bohn & Fairburn, 2008). All six found reductions in clinical impairment score with large effect sizes at end of treatment, including the sample of participants with disordered eating behaviours the week preceding baseline (Pellizzer et al., 2019c). Three studies (Pellizzer et al., 2019a, b; Wade et al., 2021) found large effect sizes at mid-treatment, one-month follow-up and three-month follow-up. Two

studies (Pellizzer et al., 2019c; Tatham et al., 2020) identified that changes were sustained from end of treatment to follow-up with small effect sizes.

CBT-T was compared with CBT-E and GSH. Tatham et al. (2020) found both CBT-T and CBT-E had large effect sizes on CIA scores at end of treatment, although the effect size for CBT-E was slightly larger. From end of treatment to follow-up, CBT-E showed larger effects in comparison to CBT-T (CBT-E had a medium effect size whereas CBT-T had a small effect size). No between-group differences were explored for CIA scores. Wade et al. (2021) found large, comparable effects for both CBT-T and GSH treatment groups at mid-treatment, end of treatment and one-month and three-month follow-ups.

Overall, the studies suggest that CBT-T results in significant improvements in psychosocial impairments with large effects. Evidence suggests that CBT-T was comparable to GSH and CBT-E, although CBT-E was superior at follow-up.

Depression and Anxiety

Five studies (Moore et al., 2021; Pellizzer et al., 2019a, b; Wade et al., 2021; Waller et al., 2018) examined the effects of CBT-T on co-morbid anxiety and depression symptoms, using the Patient Health Questionnaire (PHQ-9; Kroenke et al., 2001), the Generalised Anxiety Disorder Questionnaire (GAD-7; Spitzer et al., 2006) or Depression, Anxiety and Stress Scale–21 (DASS-21; Lovibond & Lovibond, 1995). All found CBT-T to improve anxiety and depression symptoms with medium to large effect sizes at end of treatment. At mid-treatment, effect sizes were medium (Moore et al., 2021; Pellizzer et al., 2019b) or large (Wade et al., 2021). Three studies (Pellizzer et al., 2019a, b; Wade et al., 2021) found large effects for depression and anxiety symptoms at one-month and three-month follow-ups.

In the comparison between CBT-T and GSH (Wade et al., 2021), both treatments showed large effect sizes for depression and anxiety scores at end of treatment, one-month follow-up and three-month follow-up. However, at mid-treatment, and between mid-treatment to end of treatment, CBT-T had a small effect size on depression and anxiety scores, whereas GSH had a medium effect size.

Taken together, studies suggest that CBT-T results in significant changes in co-morbid depression and anxiety symptoms with medium to large effect sizes. CBT-T was comparable to GSH at the end of treatment and follow-up, but GSH showed superior results over the course of treatment (beginning to mid-treatment and mid-treatment to post-treatment).

Discussion

This review aimed to summarise and evaluate the existing research on the efficacy and effectiveness of CBT-T within a narrative synthesis framework. Based on the findings of the eight papers reviewed, CBT-T was associated with improvements in eating disorder and related outcomes.

Eating Disorder Psychopathology

CBT-T resulted in significant reductions in overall eating disorder psychopathology pre-to post-treatment, with large effects in all studies. A large effect size is consistent with Keegan et al. (2022) meta-analysis. The current review also found that CBT-T showed maintenance of effects up to six-month follow-up. Effect sizes are comparable with those of standard-length CBT-ED at end of treatment and follow-up (Atwood & Friedman, 2020), yet, crucially, were achieved in fewer sessions. Where results were available for dietary restraint, eating concern, shape concern and weight concern specifically, significant large reductions in all these outcomes were found at the end of treatment (Moore et al., 2021; Pellizzer et al., 2019b; Waller et al., 2018) and after three-months (Pellizzer et al., 2019b); also comparable with standard-length CBT-ED (Calugi et al., 2021, 2022; Turner et al., 2016). CBT-T performed similarly when directly compared with CBT-E, with similar effect sizes at all time points (Tatham et al., 2020). Mid-treatment comparisons between CBT-T and CBT-ED cannot be made directly, as the session number for mid-treatment differs due to treatment lengths. Nevertheless, it is still useful to consider the amount of early change in outcomes, and there was significant reduction in eating disorder psychopathology following CBT-T at mid-treatment corresponding to large effects in all but one study. CBT-T also had comparable significant reductions in psychopathology to GSH at all time points measured (Wade et al., 2021). Previous research has demonstrated significant improvements in eating disorder psychopathology following GSH (Jensen et al., 2020; Traviss et al., 2011; Traviss-Turner et al., 2017).

Disordered Eating Behaviours

There was evidence of significant improvement in disordered eating behaviours (Moore et al., 2021; Pellizzer et al., 2019a, b; Rose et al., 2021; Wade et al., 2021; Waller et al., 2018), with medium to large effect sizes for frequency of objective binge eating episodes at all time points, and small to medium effect sizes for purging behaviours at end of treatment, mid-treatment, and follow-up (one study found large effects for vomiting and laxative use at end of treatment; Waller et al., 2018). Though GSH and CBT-T performed similarly for binge eating at all time points, GSH was superior to CBT-T for vomiting, while they had comparable effects for laxative use and driven exercise (Wade et al., 2021). Results for disordered behaviours are consistent with Keegan et al. (2022), who reported a large effect size for objective binge eating and a medium effect size for vomiting behaviours pre- to post- CBT-T (other forms of purging behaviours were not meta-analysed), as well as standard CBT-ED, which has shown large effect sizes for objective binge eating and small to moderate effect sizes for purging behaviours (Byrne et al., 2011; Fairburn et al., 2009, 2015; Garte et al., 2015; Knott et al., 2015). The impact of CBT-T on eating disorder psychopathology and disordered eating behaviours, with the exception of some purging behaviours, indicates that behavioural change can be achieved in the first four to six sessions of treatment.

Psychosocial Impairment

In the studies reporting psychosocial impairment relating to an eating disorder, there was significant improvement with large effects at the end of treatment (Pellizzer et al., 2019a, b, c; Rose et al., 2021; Tatham et al., 2020; Wade et al., 2021). This is consistent with Keegan et al. (2022), who reported a large effect for psychosocial impairment pre- to post-CBT-T. Additionally, there was evidence of reductions with large effects at mid-treatment and up to three-month follow-up (Pellizzer et al., 2019a, b; Wade et al., 2021). Reductions are comparable to standard CBT-ED at post-treatment and follow-up (Dalle Grave et al., 2019, 2020, 2022). Comparisons were available against CBT-E and GSH: post-treatment to follow-up CBT-E had larger effects compared to CBT-T, but similar sized effects pre- to post-treatment (Tatham et al., 2020), whereas there were comparable reductions at all timepoints between CBT-T and GSH (Wade et al., 2021). GSH has previously been demonstrated to lead to improvements in psychosocial impairment at the end of treatment, with improvements sustained at follow-up for those with binge-purge eating disorders (Fitzsimmons-Craft et al., 2020).

Depression and Anxiety

Studies reported reductions in depression and anxiety symptoms with medium to large effect sizes at the end of treatment following CBT-T (Moore et al., 2021; Pellizzer et al., 2019a, b; Wade et al., 2021; Waller et al., 2018), consistent with Keegan et al. (2022) findings of a large effect size (pre- to post- CBT-T). Furthermore, there were reductions in symptoms with medium or large effect sizes (Moore et al., 2021; Pellizzer et al., 2019b; Wade et al., 2021) at mid-treatment, and large effects up to three-month follow-up (Pellizzer et al., 2019a, b; Wade et al., 2021). Effects at all time points seem comparable to standard-length CBT-ED (Byrne et al., 2011, 2017; Fairburn et al., 2009; Knott et al., 2015; Waller et al., 2014), even with fewer sessions, and are consistent with findings that CBT-ED interventions are effective for co-morbid difficulties (Linardon et al., 2017b; Turner et al., 2016). CBT-T and GSH had comparable large effect sizes for depression and anxiety symptoms at the end of treatment and follow-up periods, but GSH had a larger effect size than CBT-T at mid-treatment (Wade et al., 2021). Previous studies have found eating disorder focused GSH interventions to successfully reduce depression and anxiety in those with non-underweight eating disorders, including BN (Sánchez-Ortiz et al., 2011) and BED (Striegel-Moore et al., 2010).

Attrition

Attrition rates indicated that CBT-T was no more acceptable than standard CBT-ED, CBT-E (Tatham et al., 2020), or GSH (Wade et al., 2021) when compared with these directly. Rates were comparable to standard, longer forms CBT-ED from a review of controlled and uncontrolled trials of CBT-E (Atwood & Friedman,

2020), and routine clinical practice studies of CBT-ED (Frostad et al., 2018; Jenkins et al., 2019; Signorini et al., 2018), which have higher attrition rates than studies conducted in research settings (Mulkens & Waller, 2021). As part of the CBT-T approach, at session four patients may be collaboratively discharged, depending on engagement and progress with therapeutic tasks. The attrition rates of the studies reviewed included both participants who were discharged at session four and participants who dropped out over the course of treatment. Considering this approach is not part of standard CBT-ED treatments, the attrition rate of CBT-T was comparable to standard CBT-ED.

Remission and Abstinence

All studies included provided remission rates for CBT-T at end of treatment and these were similar to standard forms of CBT-ED (Byrne et al., 2011; Turner et al., 2015a, b). Furthermore, one study (Tatham et al., 2020) found that CBT-E and CBT-T had comparable rates at the end of treatment and six-month follow-up. GSH had higher remission rates than CBT-T (Wade et al., 2021), which were similar to those with BN receiving GSH (Mitchell et al., 2011). Studies which provided abstinence rates (Pellizzer et al., 2019a, b; Rose et al., 2021; Waller et al., 2018) used different definitions, but reported similar rates to an effectiveness trial of standard-length CBT-ED (Turner et al., 2015a, b). Future research would benefit from having a longer timeframe for measuring cessation of disordered eating behaviours, given seven or 28 days are relatively short periods, although these periods are frequently used for remission and abstinence definitions for CBT-ED studies (Byrne et al., 2011; Linardon et al., 2017b; Turner et al., 2015a, b).

Strengths and Limitations of the Research

Findings should be interpreted with caution considering the limitations of the included studies. Study quality was mostly weak, with only the RCT receiving a moderate global rating. Most quality concerns related to study design, given that most studies were case series which had a non-randomised and uncontrolled design. Non-randomised intervention studies can overestimate the effect for interventions studied, meaning obtaining definitive results about the likely effects of an intervention can be challenging (Deeks et al., 2003). They are also more likely to introduce potential biases compared with randomised trials; thus, results evaluating effects of interventions should be interpreted with caution (Reeves et al., 2019). Treatment adherence to the CBT-T protocol and therefore the integrity of the delivery of the intervention was only monitored in three studies (Rose et al., 2021; Wade et al., 2021; Waller et al., 2018). This is of particular importance because those delivering CBT-T were mainly assistant and trainee psychologists, with qualified therapists delivering the intervention in only one study (Rose et al., 2021). Length of follow-up was relatively short in most studies, with the longest being six months. Establishing the maintenance of the effects of CBT-T requires a longer follow-up period, such as 12 months or above as examined in other CBT-ED studies (Calugi, et al., 2017; Fairburn et al., 2015; Le Grange

et al., 2022), which would allow researchers to draw conclusions about comparability of CBT-T and CBT-ED in the long-term.

All studies, with the exception of one (Rose et al., 2021), were conducted by the authors of CBT-T. A concern highlighted when judging if a treatment is more than probably effective is whether a treatment has been demonstrated to be effective when researched by a team independent of the original developers (Godfrin & van Heeringen, 2010). Therefore, this is a priority for future research. Finally, all studies were conducted in the UK and Australia, with predominantly white, female samples, which impacts the generalisability of interpretations and implications of the findings to men and non-Western countries. This is reflective of a wider issue of a lack of research into eating disorder treatment in ethnic minority groups (Rodgers et al., 2018) and men (Weltzin et al., 2005).

Despite these limitations, there are notable strengths of the included studies. Although there are methodological quality issues with case series designs, clinical practice studies are important to demonstrate the usefulness and applicability of evidence-based therapies for eating disorders (Signorini et al., 2018), given criticisms of controlled treatment effectiveness studies of CBT-ED, such as tight inclusion criteria and delivering interventions under strict conditions (Turner et al., 2015a, b). This review suggests that manualised CBT-T can be effectively implemented in outpatient and community settings, with participants representative of those who seek treatment from healthcare services with various eating disorders, albeit not patients who are underweight. All studies, with one exception (Rose et al., 2021) used ITT analysis meaning that that reported effect sizes have likely not been overestimated and conclusions regarding effectiveness are less biased (McCoy, 2017). In addition to statistically significant change in outcomes reported, several studies reported on clinically significant change, such as remission and abstinence rates, and all made use of similar validated and reliable outcome measures. Finally, more than half of the studies (Moore et al., 2021; Pellizzer et al., 2019a, c; Rose et al., 2021; Wade et al., 2021) reported power calculations and demonstrated sufficient power based on estimated effect sizes.

Strengths and Limitations of the Review

Limitations within this review should be noted. Included studies were limited to peer-reviewed journal articles and the narrative synthesis may have been enriched by including unpublished data. Although there were quality issues with the studies, all relevant studies were included, given the novelty of the treatment and limited available evidence. Data extraction was not fully cross-checked by another reviewer due to the scope and time limitations of the review, though discussion with the co-author was utilised to clarify any issues during the data extraction process.

A strength of the present review was that two reviewers independently conducted screening of all papers at each stage, with good reliability between them, for the initial searches. A quality assessment was conducted and half of the included papers were independently co-assessed by another reviewer with good reliability established. Furthermore, study authors were contacted where relevant data were not

reported, and effect sizes were calculated by the lead reviewer when not provided in the original papers, to ensure all possible results were included in the synthesis.

Implications for Research and Clinical Practice

RCTs are needed to assess the efficacy and effectiveness of CBT-T compared to current recommended treatments for non-underweight eating disorder presentations, such as standard CBT-ED and GSH (NES, 2014; NICE, 2017), with multiple sites, larger samples, and longer follow-up periods. As also noted in the previous meta-analysis (Keegan et al., 2022) there are issues with the diagnoses, age, and diversity of samples. The majority of participants had BED and BN, rather than atypical AN who are not underweight. Studies have demonstrated that there are no significant differences in eating pathology or severity of impairment between those with AN and atypical AN (Coniglio et al., 2017; Eddy et al., 2008; Thomas et al., 2009). Although those with atypical AN may not be underweight and thus appropriate for CBT-T, evidence indicates they share similar psychopathology with typical AN patients, which may potentially impact responsiveness to a briefer treatment. Therefore, future research should examine CBT-T effects with non-underweight, atypical AN presentations. Although some adolescents were included in the samples, future research should investigate if briefer forms of CBT-ED could be offered to adolescents with non-underweight eating disorders, given CBT-ED is second-line treatment for young people with most eating disorders (NES, 2014; NICE, 2017). Future research should also seek to recruit minority ethnic groups and those who do not identify as female, to consider if any treatment adaptations are required.

CBT-T had comparable results to standard-length CBT-ED but delivered in around half the time. Findings support research that most therapies have most benefit around the tenth session for eating disorders (Rose & Waller, 2017), as has been found for other mental health difficulties (Bell et al., 2017; Delgadillo et al., 2014). CBT-T was delivered mostly by novice therapists under supervision in the included studies, with effects comparable to CBT-ED delivered by qualified therapists. This supports the role of less specialised therapists under supervision delivering eating disorder treatments, as is the case with other mental health difficulties (Öst et al., 2012; Zandberg & Wilson, 2013). CBT-T may enable services to offer a briefer CBT-ED which is more cost-effective, and helps with waiting list times and treatment access (see Keegan et al., 2022). It is unclear from the current evidence whether CBT-T could bridge the 'gap' in service provision for a treatment which is more intensive than GSH, though one study included (Wade et al., 2021) showed comparable results for GSH and CBT-T. Evidence for the effectiveness of GSH interventions is reflected in current clinical guidelines for some non-underweight eating disorders (NES, 2014; NICE, 2017), while Wilson and Zandberg (2012) argue that GSH can be as effective as more specialist therapies for eating disorders. CBT-T is of higher intensity and requires more resources to deliver than GSH, including purchasing a treatment manual, more sessions, training and supervision. Further research is therefore needed to evaluate CBT-T against GSH before services introduce CBT-T as a 'mid intensity' treatment within the stepped-care approach to psychological treatment of eating disorders; CBT-T being higher intensity than GSH and lower intensity than standard-length CBT-ED.

Conclusion

The results of treatment outcomes within the current review, alongside findings from the previous meta-analysis (Keegan et al., 2022), indicate that CBT-T leads to improvements to eating disorder and co-morbid outcomes for people with non-underweight eating disorders within ten sessions. Additionally, current review findings indicate that positive improvements were found within four sessions, and gains were sustained at follow-up for a range of outcomes. Effects are mostly comparable to standard CBT-ED, but delivered across fewer sessions, addressing the research recommendation by NICE (2017) for evaluating briefer psychological treatments for eating disorders. Future research is required to strengthen the evidence base of initial positive findings, with higher quality studies addressing the current methodological concerns highlighted in this review. Limitations with the available data due to the lack of high-quality evidence means a recommendation to support the implementation of CBT-T in eating disorder services cannot be made at present, though preliminary findings appear promising.

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Data Availability Data sharing is not applicable to this review as no new data were created or analysed.

Declarations

Competing Interests There a no competing interests of review authors.

Other Information The review protocol was registered on Prospero (reference number CRD42021286870) and can be accessed via the Prospero website.

References

Atwood, M. E., & Friedman, A. (2020). A systematic review of enhanced cognitive behavioral therapy (CBT-E) for eating disorders. *International Journal of Eating Disorders, 53*(3), 311–330. https://doi.org/10.1002/eat.23206

Bell, C., Waller, G., Shafran, R., & Delgadillo, J. (2017). Is there an optimal length of psychological treatment for eating disorder pathology? *International Journal of Eating Disorders, 50*(6), 687–692. https://doi.org/10.1002/eat.22660

Bohn, K., & Fairburn, C. G. (2008). The clinical impairment assessment questionnaire (CIA). In C. G. Fairburn (Ed.), *Cognitive Behavior Therapy and Eating Disorders*. Guilford Press. https://www.credo-oxford.com/pdfs/CIA_3.0_Instructions_for_users.pdf

Byrne, S. M., Fursland, A., Allen, K. L., & Watson, H. (2011). The effectiveness of enhanced cognitive behavioural therapy for eating disorders: An open trial. *Behaviour Research and Therapy, 49*(4), 219–226. https://doi.org/10.1016/j.brat.2011.01.006

Byrne, S., Wade, T., Hay, P., Touyz, S., Fairburn, C. G., Treasure, J., Schmidt, U., McIntosh, V., Allen, K., Fursland, A., & Crosby, R. D. (2017). A randomised controlled trial of three psychological treatments for anorexia nervosa. *Psychological Medicine, 47*(16), 2823–2833. https://doi.org/10.1017/s0033291717001349

Calugi, S., Dametti, L., Dalle Grave, A., & Dalle Grave, R. (2022). Changes in specific and nonspecific psychopathology network structure after intensive cognitive behavior therapy in patients with anorexia nervosa. *International Journal of Eating Disorders, 55*(8), 1090–1099. https://doi.org/10.1002/eat.23755

Calugi, S., El Ghoch, M., & Dalle Grave, R. (2017). Intensive enhanced cognitive behavioural therapy for severe and enduring anorexia nervosa: A longitudinal outcome study. *Behaviour Research and Therapy, 89*, 41–48. https://doi.org/10.1016/j.brat.2016.11.006

Calugi, S., Sartirana, M., Frostad, S., & Dalle Grave, R. (2021). Enhanced cognitive behavior therapy for severe and extreme anorexia nervosa: An outpatient case series. *International Journal of Eating Disorders, 54*(3), 305–312. https://doi.org/10.1002/eat.23428

Campbell, M., McKenzie, J. E., Sowden, A., Katikireddi, S. V., Brennan, S. E., Ellis, S., ..., & Thomson, H. (2020). Synthesis without meta-analysis (SWiM) in systematic reviews: Reporting guideline. *BMJ*, *368*. https://doi.org/10.1136/bmj.l6890

Chesney, E., Goodwin, G. M., & Fazel, S. (2014). Risks of all-cause and suicide mortality in mental disorders: A meta-review. *World Psychiatry, 13*(2), 153–160. https://doi.org/10.1002/wps.20128

Cohen, J. (1988). *Statistical power analysis for the behavioral sciences* (2nd ed.). Erlbaum.

Coniglio, K. A., Becker, K. R., Franko, D. L., Zayas, L. V., Plessow, F., Eddy, K. T., & Thomas, J. J. (2017). Won't stop or can't stop? Food restriction as a habitual behavior among individuals with anorexia nervosa or atypical anorexia nervosa. *Eating Behaviors, 26*, 144–147. https://doi.org/10.1016/j.eatbeh.2017.03.005

Cooper, M., Todd, G., & Wells, A. (2001). *Bulimia nervosa: A cognitive therapy Programme for clients*. Jessica Kingsley Publishers.

Cooper, P. J. (1993). *Bulimia nervosa and binge eating. A guide to recovery*. Robinson.

Crow, S. J., Agras, W. S., Halmi, K. A., Fairburn, C. G., Mitchell, J. E., & Nyman, J. A. (2013). A cost effectiveness analysis of stepped care treatment for bulimia nervosa. *International Journal of Eating Disorders, 46*(4), 302–307. https://doi.org/10.1002/eat.22087

Crow, S. J., Peterson, C. B., Swanson, S. A., Raymond, N. C., Specker, S., Eckert, E. D., & Mitchell, J. E. (2009). Increased mortality in bulimia nervosa and other eating disorders. *American Journal of Psychiatry, 166*(12), 1342–1346. https://doi.org/10.1176/appi.ajp.2009.09020247

Dahlenburg, S. C., Gleaves, D. H., & Hutchinson, A. D. (2019). Treatment outcome research of enhanced cognitive behaviour therapy for eating disorders: A systematic review with narrative and meta-analytic synthesis. *Eating Disorders, 27*(5), 482–502. https://doi.org/10.1080/10640266.2018.1560240

Dalle Grave, R., Conti, M., & Calugi, S. (2020). Effectiveness of intensive cognitive behavioral therapy in adolescents and adults with anorexia nervosa. *International Journal of Eating Disorders, 53*(9), 1428–1438. https://doi.org/10.1002/eat.23337

Dalle Grave, R., Dametti, L., Conti, M., Bersan, C., Dalle Grave, A., & Calugi, S. (2022). Day-hospital enhanced cognitive behavior therapy for adults with eating disorders: Immediate and follow-up effects. *International Journal of Eating Disorders, 55*(1), 125–130. https://doi.org/10.1002/eat.23632

Dalle Grave, R., Sartirana, M., & Calugi, S. (2019). Enhanced cognitive behavioral therapy for adolescents with anorexia nervosa: Outcomes and predictors of change in a real-world setting. *International Journal of Eating Disorders, 52*(9), 1042–1046. https://doi.org/10.1002/eat.23122

de Jong, M., Schoorl, M., & Hoek, H. W. (2018). Enhanced cognitive behavioural therapy for patients with eating disorders: A systematic review. *Current Opinion in Psychiatry, 31*(6), 436. https://doi.org/10.1097/yco.0000000000000452

Deeks, J. J., Dinnes, J., D'Amico, R., Sowden, A. J., Sakarovitch, C., Song, F., ..., & Altman, D. G. (2003). Evaluating non-randomised intervention studies. *Health Technology Assessment (Winchester, England)*, *7*(27), iii-173. https://doi.org/10.3310/hta7270

Delgadillo, J., McMillan, D., Lucock, M., Leach, C., Ali, S., & Gilbody, S. (2014). Early changes, attrition, and dose–response in low intensity psychological interventions. *British Journal of Clinical Psychology, 53*(1), 114–130. https://doi.org/10.1111/bjc.12031

Eddy, K. T., Doyle, A. C., Hoste, R. R., Herzog, D. B., & Le Grange, D. (2008). Eating disorder not otherwise specified in adolescents. *Journal of the American Academy of Child & Adolescent Psychiatry, 47*(2), 156–164. https://doi.org/10.1097/chi.0b013e31815cd9cf

Fairburn, C. G., Jones, R., Peveler, R. C., Carr, S. J., Solomon, R. A., O'Connor, M. E., ..., & Hope, R. A. (1991). Three psychological treatments for bulimia nervosa: A comparative trial. *Archives of General Psychiatry*, *48*(5), 463–469. https://doi.org/10.1001/archpsyc.1991.01810290075014

Fairburn, C. G., & Beglin, S. J. (2008). Eating Disorder Examination Questionnaire. In C.G. Fairburn (Ed.), *Cognitive Behavior Therapy and Eating Disorders*. Guilford Press. https://www.cbte.co/site/download/ede-q-6-0/?wpdmdl=620&masterkey=5c645124ce635

Fairburn, C. G., Cooper D. Z., Doll, H. A., O'Connor, M. E., Bohn, K., Hawker, D. M., ..., & Palmer, R. L. (2009). Transdiagnostic cognitive-behavioral therapy for patients with eating disorders: a two-site trial with 60-week follow-up. *American Journal of Psychiatry*, *166*(3), 311-319. https://doi.org/10.1176/appi.ajp.2008.08040608

Fairburn, C. G., Bailey-Straebler, S., Basden, S., Doll, H. A., Jones, R., Murphy, R., ..., & Cooper, Z. (2015). A transdiagnostic comparison of enhanced cognitive behaviour therapy (CBT-E) and interpersonal psychotherapy in the treatment of eating disorders. *Behaviour research and therapy*, *70*, 64–71. https://doi.org/10.1016/j.brat.2015.04.010

Fairburn, C. G. (2008). *Cognitive behavior therapy and eating disorders*. Guilford Press.

Fairburn, C. G., Agras, W. S., Walsh, B. T., Wilson, G. T., & Stice, E. (2004). Prediction of outcome in bulimia nervosa by early change in treatment. *American Journal of Psychiatry, 161*(12), 2322–2324. https://doi.org/10.1176/appi.ajp.161.12.2322

Fairburn, C. G., & Beglin, S. J. (1994). Assessment of eating disorders: Interview or self-report questionnaire? *International Journal of Eating Disorders, 16*(4), 363–370. https://doi.org/10.1002/1098-108X(199412)16:4%3c363::AID-EAT2260160405%3e3.0.CO;2-%23

Faul, F., Erdfelder, E., Lang, A. G., & Buchner, A. (2007). G* Power 3: A flexible statistical power analysis program for the social, behavioral, and biomedical sciences. *Behavior Research Methods, 39*(2), 175–191. https://doi.org/10.3758/BF03193146

Fensterheim, H., & Raw, S. D. (1996). Psychotherapy research is not psychotherapy practice. *Clinical Psychology: Science and Practice, 3*(2), 168–171. https://doi.org/10.1111/j.1468-2850.1996.tb00067.x

Fernández-Aranda, F., Casas, M., Claes, L., Bryan, D. C., Favaro, A., Granero, R., ..., & Treasure, J. (2020). COVID-19 and implications for eating disorders. *European Eating Disorders Review*, *28*(3), 239. https://doi.org/10.1002/erv.2738

Fitzsimmons-Craft, E. E., Taylor, C. B., Graham, A. K., Sadeh-Sharvit, S., Balantekin, K. N., Eichen, D. M., ..., & Wilfley, D. E. (2020). Effectiveness of a digital cognitive behavior therapy–guided self-help intervention for eating disorders in college women: A cluster randomized clinical trial. *JAMA Network Open*, *3*(8), e2015633-e2015633. https://doi.org/10.1001/jamanetworkopen.2020.15633

Frostad, S., Danielsen, Y. S., Rekkedal, G. Å., Jevne, C., Dalle Grave, R., Rø, Ø., & Kessler, U. (2018). Implementation of enhanced cognitive behaviour therapy (CBT-E) for adults with anorexia nervosa in an outpatient eating-disorder unit at a public hospital. *Journal of Eating Disorders, 6*(1), 1–8. https://doi.org/10.1186/s40337-018-0198-y

Galmiche, M., Déchelotte, P., Lambert, G., & Tavolacci, M. P. (2019). Prevalence of eating disorders over the 2000–2018 period: A systematic literature review. *The American Journal of Clinical Nutrition, 109*(5), 1402–1413. https://doi.org/10.1093/ajcn/nqy342

Garte, M., Hagen, B., Reas, D. L., Isdahl, P. J., Hinderaker, E., & Rø, Ø. (2015). Implementation of a day hospital treatment programme based on CBT-E for severe eating disorders in adults: An open trial. *Advances in Eating Disorders: Theory, Research and Practice, 3*(1), 48–62. https://doi.org/10.1080/21662630.2014.958510

Ghaderi, A. (2006). Does individualization matter? A randomized trial of standardized (focused) versus individualized (broad) cognitive behavior therapy for bulimia nervosa. *Behaviour Research and Therapy, 44*(2), 273–288. https://doi.org/10.1016/j.brat.2005.02.004

Godfrin, K. A., & Van Heeringen, C. (2010). The effects of mindfulness-based cognitive therapy on recurrence of depressive episodes, mental health and quality of life: A randomized controlled study. *Behaviour Research and Therapy, 48*(8), 738–746. https://doi.org/10.1016/j.brat.2010.04.006

Green, B. H., & Griffiths, E. C. (2014). Hospital admission and community treatment of mental disorders in England from 1998 to 2012. *General Hospital Psychiatry, 36*(4), 442–448. https://doi.org/10.1016/j.genhosppsych.2014.02.006

Hansen, S. J., Stephan, A., & Menkes, D. B. (2021). The impact of COVID-19 on eating disorder referrals and admissions in Waikato, New Zealand. *Journal of Eating Disorders, 9*(1), 1–10. https://doi.org/10.1186/s40337-021-00462-0

Haripersad, Y. V., Kannegiesser-Bailey, M., Morton, K., Skeldon, S., Shipton, N., Edwards, K., ..., & Martin, A. C. (2021). Outbreak of anorexia nervosa admissions during the COVID-19 pandemic. *Archives of Disease in Childhood*, *106*(3), e15-e15. https://doi.org/10.1136/archdischild-2020-319868

Higgins, J. P., & Thompson, S. G. (2002). Quantifying heterogeneity in a meta-analysis. *Statistics in Medicine, 21*(11), 1539–1558. https://doi.org/10.1002/sim.1186

Hoskins, J. I., Blood, L., Stokes, H. R., Tatham, M., Waller, G., & Turner, H. (2019). Patients' experiences of brief cognitive behavioral therapy for eating disorders: A qualitative investigation. *International Journal of Eating Disorders, 52*(5), 530–537. https://doi.org/10.1002/eat.23039

Imrey, P. B. (2020). Limitations of meta-analyses of studies with high heterogeneity. *JAMA Network Open, 3*(1), e1919325–e1919325. https://doi.org/10.1001/jamanetworkopen.2019.19325

Ioannidis, J. P. (2008). Interpretation of tests of heterogeneity and bias in meta-analysis. *Journal of Evaluation in Clinical Practice, 14*(5), 951–957. https://doi.org/10.1111/j.1365-2753.2008.00986.x

Jacobson, N. S., & Truax, P. (1991). Clinical significance: A statistical approach to defining meaningful change in psychotherapy research. *Journal of Consulting and Clinical Psychology, 59*, 12–19. https://doi.org/10.1037/10109-042

Jenkins, P. E., Morgan, C., & Houlihan, C. (2019). Outpatient CBT for underweight patients with eating disorders: Effectiveness within a National Health Service (NHS) eating disorders service. *Behavioural and Cognitive Psychotherapy, 47*(2), 217–229. https://doi.org/10.1017/s1352465818000449

Jensen, E. S., Linnet, J., Holmberg, T. T., Tarp, K., Nielsen, J. H., & Lichtenstein, M. B. (2020). Effectiveness of internet-based guided self-help for binge-eating disorder and characteristics of completers versus noncompleters. *International Journal of Eating Disorders, 53*(12), 2026–2031. https://doi.org/10.1002/eat.23384

Kazdin, A. E. (2008). Evidence-based treatment and practice: New opportunities to bridge clinical research and practice, enhance the knowledge base, and improve patient care. *American Psychologist, 63*(3), 146–159. https://doi.org/10.1037/0003-066X.63.3.146

Keegan, E., Waller, G., & Wade, T. D. (2022). A systematic review and meta-analysis of a 10-session cognitive behavioural therapy for non-underweight eating disorders. *Clinical Psychologist, 26*(3), 241–254. https://doi.org/10.1080/13284207.2022.2075257

Knott, S., Woodward, D., Hoefkens, A., & Limbert, C. (2015). Cognitive behaviour therapy for bulimia nervosa and eating disorders not otherwise specified: Translation from randomized controlled trial to a clinical setting. *Behavioural and Cognitive Psychotherapy, 43*(6), 641–654. https://doi.org/10.1017/S1352465814000393

Kroenke, K., Spitzer, R. L., & Williams, J. B. W. (2001). The PHQ- 9—validity of a brief depression severity measure. *Journal of General Internal Medicine, 16*, 606–613. https://doi.org/10.1046/j.1525-1497.2001.016009606.x

Layard, R., & Clark, D. M. (2014). *Thrive: The power of evidence-based psychological therapies*. Penguin UK.

Le Grange, D., Eckhardt, S., Dalle Grave, R., Crosby, R. D., Peterson, C. B., Keery, H., ..., & Martell, C. (2022). Enhanced cognitive-behavior therapy and family-based treatment for adolescents with an eating disorder: a non-randomized effectiveness trial. *Psychological Medicine*, *52*(13), 2520–2530. https://doi.org/10.1017/s0033291720004407

Linardon, J., Brennan, L., & De la Piedad Garcia, X. (2016). Rapid response to eating disorder treatment: A systematic review and meta-analysis. *International Journal of Eating Disorders, 49*(10), 905–919. https://doi.org/10.1002/eat.22595

Linardon, J., de la Piedad Garcia, X., & Brennan, L. (2017a). Predictors, moderators, and mediators of treatment outcome following manualised cognitive-behavioural therapy for eating disorders: A systematic review. *European Eating Disorders Review, 25*(1), 3–12. https://doi.org/10.1002/erv.2492

Linardon, J., Wade, T. D., De la Piedad Garcia, X., & Brennan, L. (2017b). The efficacy of cognitive-behavioral therapy for eating disorders: A systematic review and meta-analysis. *Journal of Consulting and Clinical Psychology, 85*(11), 1080. https://doi.org/10.1037/ccp0000245

Lisy, K., & Porritt, K. (2016). Narrative synthesis: Considerations and challenges. *JBI Evidence Implementation, 14*(4), 201. https://doi.org/10.1097/01.xeb.0000511348.97198.8c

Lovibond, P. F., & Lovibond, S. H. (1995). The structure of negative emotional states: Comparison of the depression anxiety stress scales (DASS) with the beck depression and anxiety inventories. *Behaviour Research and Therapy, 33*, 335–343. https://doi.org/10.1016/0005-7967(94)00075-U

Matthews, A., Kramer, R. A., Peterson, C. M., & Mitan, L. (2021). Higher admission and rapid readmission rates among medically hospitalized youth with anorexia nervosa/atypical anorexia nervosa during COVID-19. *Eating Behaviors, 43*, 101573. https://doi.org/10.1016/j.eatbeh.2021.101573

McCoy, C. E. (2017). Understanding the intention-to-treat principle in randomized controlled trials. *Western Journal of Emergency Medicine, 18*(6), 1075. https://doi.org/10.5811/westjem.2017.8.35985

McHugh, M. L. (2012). Interrater reliability: the kappa statistic. *Biochemia Medica, 22*(3), 276–282. https://doi.org/10.11613/bm.2012.031

McKenzie, J. E., & Brennan, S. E. (2019). Synthesizing and presenting findings using other methods. *Cochrane Handbook for Systematic Reviews of Interventions*, 321–347. https://doi.org/10.1002/9781119536604.ch12

Meldrum, M. L. (2000). A brief history of the randomized controlled trial: From oranges and lemons to the gold standard. *Hematology/oncology clinics of North America, 14*(4), 745–760. https://doi.org/10.1016/S0889-8588(05)70309-9

Mitchell, J. E., Agras, S., Crow, S., Halmi, K., Fairburn, C. G., Bryson, S., & Kraemer, H. (2011). Stepped care and cognitive–behavioural therapy for bulimia nervosa: Randomised trial. *The British Journal of Psychiatry, 198*(5), 391–397. https://doi.org/10.1192/bjp.bp.110.082172

Mond, J. M., Hay, P. J., Rodgers, B., & Owen, C. (2006). Eating Disorder Examination Questionnaire (EDE-Q): Norms for young adult women. *Behaviour Research and Therapy, 44*(1), 53–62. https://doi.org/10.1016/j.brat.2004.12.003

Moore, E., Hinde, M., & Waller, G. (2021). Brief cognitive behavioural therapy for binge-eating disorder: Clinical effectiveness in a routine clinical setting. *The Cognitive Behaviour Therapist*, *14*. https://doi.org/10.1017/s1754470x21000131

Mulkens, S., & Waller, G. (2021). New developments in cognitive-behavioural therapy for eating disorders (CBT-ED). *Current Opinion in Psychiatry, 34*(6), 576. https://doi.org/10.1097/yco.0000000000000745

National Institute of Clinical Excellence. (2017). Eating disorders: Recognition and treatment. https://www.nice.org.uk/guidance/ng69

NHS Education for Scotland. (2014). *The matrix: a guide to delivering evidence-based psychological therapies in Scotland*. https://www.nes.scot.nhs.uk/media/33afwaiq/matrix_part_1.pdf

NHS Education for Scotland. (2015). *The Matrix Evidence Tables: Children and Young People*. https://www.nes.scot.nhs.uk/media/420chmra/matrix_-_children_youngpeopletablesfinal_2015.pdf

NHS England. (2022). *Children and Young People with an Eating Disorder Waiting Times, 2022*. https://www.england.nhsuk/statistics/statistical-work-areas/cyped-waiting-times/

Nicholls, D., & Viner, R. (2005). Eating disorders and weight problems. *BMJ, 330*(7497), 950–953. https://doi.org/10.1136/bmj.330.7497.950

Öst, L. G., Karlstedt, A., & Widén, S. (2012). The effects of cognitive behavior therapy delivered by students in a psychologist training program: An effectiveness study. *Behavior Therapy, 43*(1), 160–173. https://doi.org/10.1016/j.beth.2011.05.001

Öst, L.-G., & Ollendick, T. H. (2017). Brief, intensive and concentrated cognitive behavioral treatments for anxiety disorders in children: A systematic review and meta-analysis. *Behaviour Research and Therapy, 97*, 134–145. https://doi.org/10.1016/j.brat.2017.07.00

Page, M. J., McKenzie, J. E., Bossuyt, P. M., Boutron, I., Hoffmann, T. C., Mulrow, C. D., ..., & Moher, D. (2021). The PRISMA 2020 statement: An updated guideline for reporting systematic reviews. *Systematic Reviews*, *10*(1), 1–11. https://doi.org/10.1186/s13643-021-01626-4

Pellizzer, M. L., Waller, G., & Wade, T. D. (2019a). A pragmatic effectiveness study of 10-session cognitive behavioural therapy (CBT-T) for eating disorders: Targeting barriers to treatment provision. *European Eating Disorders Review, 27*(5), 557–570. https://doi.org/10.1002/erv.2684

Pellizzer, M. L., Waller, G., & Wade, T. D. (2019b). Ten-session cognitive behaviour therapy for eating disorders: Outcomes from a pragmatic pilot study of Australian non-underweight clients. *The Clinical Psychologist, 23*(2), 124–132. https://doi.org/10.1111/cp.12170

Pellizzer, M. L., Waller, G., & Wade, T. D. (2019c). Predictors of outcome in cognitive behavioural therapy for eating disorders: An exploratory study. *Behaviour Research and Therapy, 116*, 61–68. https://doi.org/10.1016/j.brat.2019.02.005

Phillipou, A., Tan, E. J., Toh, W. L., Van Rheenen, T. E., Meyer, D., Neill, E., ..., & Rossell, S. L. (2021). Mental health of individuals with and without eating disorders across six months and two waves of COVID-19. *Eating Behaviors*, *43*, 101564. https://doi.org/10.1016/j.eatbeh.2021.101564

Popay, J., Roberts, H., Sowden, A., Petticrew, M., Arai, L., Rodgers, M., ..., & Duffy, S. (2006). Guidance on the conduct of narrative synthesis in systematic reviews. *A product from the ESRC methods programme*, *1*(1). http://www.lancs.ac.uk/shm/research/nssr/research/dissemination/publications/NS_Synthesis_Guidance_v1.pdf

Reeves, B. C., Deeks, J. J., Higgins, J. P., Shea, B., Tugwell, P., Wells, G. A., & Cochrane Non-Randomized Studies of Interventions Methods Group. (2019). Including non-randomized studies on intervention effects. *Cochrane Handbook for Systematic Reviews of Interventions*, 595–620. https://doi.org/10.1002/9781119536604.ch24

Rodgers, R. F., Berry, R., & Franko, D. L. (2018). Eating disorders in ethnic minorities: An update. *Current Psychiatry Reports, 20*(10), 1–11. https://doi.org/10.1007/s11920-018-0938-3

Rose, C., Bakopoulou, I., & Novak, T. (2021). A case series of CBT-T in routine clinical practice. *International Journal of Eating Disorders, 54*(8), 1549–1554. https://doi.org/10.1002/eat.23566

Rose, C., & Waller, G. (2017). Cognitive–behavioral therapy for eating disorders in primary care settings: Does it work, and does a greater dose make it more effective? *International Journal of Eating Disorders, 50*(12), 1350–1355. https://doi.org/10.1002/eat.22778

Sánchez-Ortiz, V. C., Munro, C., Stahl, D., House, J., Startup, H., Treasure, J., ..., & Schmidt, U. (2011). A randomized controlled trial of internet-based cognitive-behavioural therapy for bulimia nervosa or related disorders in a student population. *Psychological Medicine*, *41*(2), 407–417. https://doi.org/10.1017/s0033291710000711

Schmidt, U., Adan, R., Böhm, I., Campbell, I. C., Dingemans, A., Ehrlich, S., Elzakkers, I., Favaro, A., Giel, K., Harrison, A., Himmerich, H., Hoek, H. W., Herpertz-Dahlmann, B., Kas, M. J., Seitz, J., Smeets, P., Sternheim, L., Tenconi, E., van Elburg, A., …, & Zipfel, S. (2016). Eating disorders: the big issue. *The Lancet Psychiatry*, *3*(4), 313–315. https://doi.org/10.1016/S2215-0366(16)00081-X

Scottish Intercollegiate Guidelines Network (2022). SIGN 164 Eating Disorders: a National Guideline. https://www.sign.ac.uk/media/1987/sign-164-eating-disorders-v2.pdf

Signorini, R., Sheffield, J., Rhodes, N., Fleming, C., & Ward, W. (2015). The effectiveness of enhanced cognitive behavioural therapy in an outpatient setting. *Journal of Eating Disorders, 3*(1), 1–1. https://doi.org/10.1186/2050-2974-3-S1-O3

Signorini, R., Sheffield, J., Rhodes, N., Fleming, C., & Ward, W. (2018). The effectiveness of enhanced cognitive behavioural therapy (CBT-E): A naturalistic study within an out-patient eating disorder service. *Behavioural and Cognitive Psychotherapy, 46*(1), 21–34. https://doi.org/10.1017/s1352465817000352

Slade, E., Keeney, E., Mavranezouli, I., Dias, S., Fou, L., Stockton, S., ..., & Kendall, T. (2018). Treatments for bulimia nervosa: A network meta-analysis. *Psychological Medicine*, *48*(16), 2629–2636. https://doi.org/10.1017/S0033291718001071

Solmi, F., Downs, J. L., & Nicholls, D. E. (2021). COVID-19 and eating disorders in young people. *The Lancet Child & Adolescent Health, 5*(5), 316–318. https://doi.org/10.1016/S2352-4642(21)00094-8

Spitzer, R. L., Kroenke, K., Williams, J. B., & Löwe, B. (2006). A brief measure for assessing generalized anxiety disorder: The GAD-7. *Archives of Internal Medicine, 166*(10), 1092–1097. https://doi.org/10.1001/archinte.166.10.1092

Stemler, S. E. (2004). A comparison of consensus, consistency, and measurement approaches to estimating interrater reliability. *Practical Assessment, Research, and Evaluation, 9*(1), 4. https://doi.org/10.7275/96jp-xz07

Striegel-Moore, R. H., Wilson, G. T., DeBar, L., Perrin, N., Lynch, F., Rosselli, F., & Kraemer, H. C. (2010). Cognitive behavioral guided self-help for the treatment of recurrent binge eating. *Journal of Consulting and Clinical Psychology, 78*(3), 312–321. https://doi.org/10.1037/a0018915

Tatham, M., Hewitt, C., & Waller, G. (2020). Outcomes of brief and enhanced cognitive-behavioural therapy for adults with non-underweight eating disorders: A non-randomized comparison. *European Eating Disorders Review, 28*(6), 701–708. https://doi.org/10.1002/erv.2765

Tatham, M., Turner, H., Mountford, V. A., Tritt, A., Dyas, R., & Waller, G. (2015). Development, psychometric properties and preliminary clinical validation of a brief, session-by-session measure of eating disorder cognitions and behaviors: The ED-15. *International Journal of Eating Disorders, 48*(7), 1005–1015. https://doi.org/10.1002/eat.22430

Thomas, B. H., Ciliska, D., Dobbins, M., & Micucci, S. (2004). A process for systematically reviewing the literature: Providing the research evidence for public health nursing interventions. *Worldviews on Evidence-Based Nursing, 1*(3), 176–184. https://doi.org/10.1111/j.1524-475X.2004.04006.x

Thomas, J. J., Vartanian, L. R., & Brownell, K. D. (2009). The relationship between eating disorder not otherwise specified (EDNOS) and officially recognized eating disorders: Meta-analysis and implications for DSM. *Psychological Bulletin, 135*(3), 407–433. https://doi.org/10.1037/a0015326

Traviss, G. D., Heywood-Everett, S., & Hill, A. J. (2011). Guided self-help for disordered eating: A randomised control trial. *Behaviour Research and Therapy, 49*(1), 25–31. https://doi.org/10.1016/j.brat.2010.10.007

Traviss-Turner, G. D., West, R. M., & Hill, A. J. (2017). Guided self-help for eating disorders: A systematic review and metaregression. *European Eating Disorders Review, 25*(3), 148–164. https://doi.org/10.1002/erv.2507

Tseng, M. C. M., Tu, C. Y., & Chang, Y. T. (2021). Healthcare use and costs of adults with anorexia nervosa and bulimia nervosa in Taiwan. *International Journal of Eating Disorders, 54*(1), 69–80. https://doi.org/10.1002/eat.23419

Turner, H., Bryant-Waugh, R., & Marshall, E. (2015a). The impact of early symptom change and therapeutic alliance on treatment outcome in cognitive-behavioural therapy for eating disorders. *Behaviour Research and Therapy, 73*, 165–169. https://doi.org/10.1016/j.brat.2015.08.006

Turner, H., Marshall, E., Stopa, L., & Waller, G. (2015b). Cognitive-behavioural therapy for outpatients with eating disorders: Effectiveness for a transdiagnostic group in a routine clinical setting. *Behaviour Research and Therapy, 68*, 70–75. https://doi.org/10.1016/j.brat.2015.03.001

Turner, H., Marshall, E., Wood, F., Stopa, L., & Waller, G. (2016). CBT for eating disorders: The impact of early changes in eating pathology on later changes in personality pathology, anxiety and depression. *Behaviour Research and Therapy, 77*, 1–6. https://doi.org/10.1016/j.brat.2015.11.011

Vall, E., & Wade, T. D. (2015). Predictors of treatment outcome in individuals with eating disorders: A systematic review and meta-analysis. *International Journal of Eating Disorders, 48*(7), 946–971. https://doi.org/10.1002/eat.22411

Wade, T. D., Ghan, C., & Waller, G. (2021). A randomized controlled trial of two 10-session cognitive behaviour therapies for eating disorders: An exploratory investigation of which approach works best for whom. *Behaviour Research and Therapy, 146*, 103962. https://doi.org/10.1016/j.brat.2021.103962

Waller, G., Tatham, M., Turner, H., Mountford, V. A., Bennetts, A., Bramwell, K., ..., & Ingram, L. (2018). A 10-session cognitive-behavioral therapy (CBT-T) for eating disorders: Outcomes from a case series of nonunderweight adult patients. *International Journal of Eating Disorders*, *51*(3), 262–269. https://doi.org/10.1002/eat.22837

Waller, G., Cordery, H., Corstorphine, E., Hinrichsen, H., Lawson, R., Mountford, V., & Russell, K. (2007). *Cognitive behavioral therapy for eating disorders: A comprehensive treatment guide*. Cambridge University Press.

Waller, G., Gray, E., Hinrichsen, H., Mountford, V., Lawson, R., & Patient, E. (2014). Cognitive-behavioral therapy for bulimia nervosa and atypical bulimic nervosa: Effectiveness in clinical settings. *International Journal of Eating Disorders, 47*(1), 13–17. https://doi.org/10.1002/eat.22181

Waller, G., Turner, H. M., Tatham, M., Mountford, V. A., & Wade, T. D. (2019). *Brief cognitive behavioural therapy for non-underweight patients: CBT-T for eating disorders*. Routledge.

Watson, H. J., McLagan, N., Zerwas, S. C., Crosby, R. D., Levine, M. D., Runfola, C. D., ..., & Crow, S. J. (2017). Cost-effectiveness of internet-based cognitive-behavioral treatment for bulimia nervosa: results of a randomized controlled trial. *The Journal of Clinical Psychiatry*, *78*(1), 3849. https://doi.org/10.4088/jcp.16m11314

Weissman, R. S., & Rosselli, F. (2017). Reducing the burden of suffering from eating disorders: Unmet treatment needs, cost of illness, and the quest for cost-effectiveness. *Behaviour Research and Therapy, 88*, 49–64. https://doi.org/10.1016/j.brat.2016.09.006

Weltzin, T. E., Weisensel, N., Franczyk, D., Burnett, K., Klitz, C., & Bean, P. (2005). Eating disorders in men: Update. *Journal of Men's Health and Gender, 2*(2), 186–193. https://doi.org/10.1016/j.jmhg.2005.04.008

Wilson, G. T., & Zandberg, L. J. (2012). Cognitive–behavioral guided self-help for eating disorders: Effectiveness and scalability. *Clinical Psychology Review, 32*(4), 343–357. https://doi.org/10.1016/j.cpr.2012.03.001

Zandberg, L. J., & Wilson, G. T. (2013). Train-the-trainer: Implementation of cognitive behavioural guided self-help for recurrent binge eating in a naturalistic setting. *European Eating Disorders Review, 21*(3), 230–237. https://doi.org/10.1002/erv.2210

Authors and Affiliations

Andreas Paphiti[1,2] · Emily Newman[1]

✉ Andreas Paphiti
a.paphiti@sms.ed.ac.uk

[1] Clinical Psychology Department, School of Health in Social Science, The University of Edinburgh, Old Medical Building, Teviot Place, Edinburgh, UK

[2] Tayside Eating Disorders Service, NHS Tayside, Dudhope House, 15 Dudhope Terrace, Dundee, UK