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BRIEF REPORT

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Brief group cognitive-behavioral therapy for bulimia nervosa and binge-eating disorder: A pilot study of feasibility and acceptability

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Abstract

Objective: Brief cognitive-behavioral therapy for non-underweight eating disorders (CBT-T) has been shown to be clinically useful in non-underweight samples, when delivered one-to-one. This pilot study assessed the acceptance, compliance and feasibility levels of a group version of CBT-T, which has the potential to enhance patient access.

Method: A group CBT-T protocol was developed and piloted in two therapy groups ($N = 8$). Eating disorder attitudes and behaviors, depression and anxiety were assessed at the beginning and end of treatment.

Results: A third of all patients approached accepted the offer of group CBT-T, and entered treatment. Among that group of treatment starters, none were lost to treatment. The therapy was feasible in practical terms, including online delivery. Finally, mean scores on measures suggested improvement in clinical profiles.

Discussion: This pilot study demonstrated that a group CBT-T is a feasible intervention for non-underweight eating disorders in adults, with low acceptance but high compliance. Group CBT-T has the potential to reduce demand on services and in turn increase availability of treatment to those with eating disorders.

Public Significance: The present research contributes to the treatment of non-underweight adults with eating disorders. Group CBT-T was shown to be feasible in this pilot study. It was associated with low acceptance but strong compliance. If supported by further research, group CBT-T has the potential to reduce waitlists, ensure throughput in services, and ultimately improve the lives of many who are affected by eating disorders.

KEYWORDS

acceptance, binge-eating disorder, bulimia nervosa, CBT-T, compliance, feasibility, group cognitive-behavior therapy

1 | INTRODUCTION

Cognitive-behavioral therapy (CBT-ED) is the most efficacious and effective treatment for adults with non-underweight eating disorders, such as bulimia nervosa (BN) and binge-eating disorder (BED) (National Institute of Health and Care Effectiveness [NICE], 2017). Its effectiveness has been demonstrated in randomized control trials (RCTs) (Byrne et al., 2011; Fairburn et al., 2009), and supported by

open trials (Signorini et al., 2018; Turner et al., 2015). NICE (2017) identified the need for briefer therapies for eating disorders. Therefore, a briefer, 10-session version of CBT-ED (CBT-T) has been developed for non-underweight eating disorders (Waller et al., 2019). It has been tested in one randomized controlled trial to date (Pellizzer et al., 2019), as well as several case series (Keegan et al., 2022). Briefer therapy allows more patients to access the support that they need, reducing waiting times, and lowering costs. Its benefits might be even greater if the therapy were delivered in a group format. Existing CBT-ED groups have good outcomes (Wade et al., 2017), but briefer versions could support better access for patients.

The aim of the present research was to determine acceptance, compliance and feasibility levels of group CBT-T for non-underweight eating disorder patients, with the longer-term aim of guiding future research in the form of an RCT. Acceptance and compliance were defined respectively by the numbers of patients who agreed to the treatment and who completed therapy fully. Feasibility was defined as the ability to deliver the therapy at a practical level. Clinical outcomes will indicate the potential degree of change.

2 | METHOD

2.1 | Design

An uncontrolled case series open-label pre-post trial design was used to evaluate the feasibility and acceptability of group CBT-T for adults in a routine clinical setting. Outcomes were measured at baseline (Session 1) and the end of therapy (Session 10). All patients completed therapy and no data were missing. The work was conducted during Coronavirus (COVID-19) restrictions (recruitment and data collection April–July 2020), so all sessions were run via telehealth (Waller et al., 2020), using Zoom software (Zoom Video Communications).

2.2 | Ethical issues

Specific ethical approval was not required as the pilot study evaluated existing practice (National Health Service Research Authority, 2011). All patients gave written consent to take part and for their outcomes to be anonymously analyzed and published.

2.3 | Patients

Eight female patients (mean age = 26.3 years; *SD* = 5.5) were recruited, split into two therapy groups by diagnosis (BN and BED; $N = 4$ each). This low number was chosen to determine the feasibility and acceptability of the intervention before wider implementation. To examine whether acceptance and compliance differed by diagnosis, the two groups consisted of patients with BED and BN, respectively. This diagnostic grouping also facilitated interaction between individuals with similar eating disorders, focusing on shared behavioral presentations. Table 2 shows pretreatment characteristics.

Patients were referred to the South Yorkshire Eating Disorder Association service, following self-referral or clinician referral. All were assessed before being placed on the waitlist for therapy, to establish diagnosis and monitor risk. The waitlist consisted of two lists—one for CBT-T, one for more generic counseling. Patients were placed on the counseling list if they had stated that they were interested in talking about their wider concerns, rather than being treated for their eating disorder directly.

Recruitment for group CBT-T involved reviewing the full waitlist of patients assessed as suitable for CBT-T, and who did not meet exclusion criteria. Exclusion criteria were severe vomiting or laxative use (>5 episodes a week), Body Mass Index (BMI = weight in kg/height in m^2) <17.5 kg/m^2, self-harm, or active suicidality. All were offered group CBT-T forthwith, or the option of waiting the standard longer time for individual CBT-T. Each participant reported at least one episode of binge eating or purging per week, meeting DSM-5 criteria for BED ($N = 4$) or BN ($N = 4$).

2.4 | Measures and procedure

Patients completed the following well-validated measures at baseline (Session 1) and at end of therapy (Session 10). The Eating Disorder Examination-Questionnaire (EDE-Q v6; Fairburn, 2008) assessed eating attitudes. The Personal Health Questionnaire (PHQ-9; Kroenke et al., 2001) and Generalized Anxiety Disorder scale (GAD-7; Spitzer et al., 2006) measured depression and anxiety, respectively. Weekly objective binge eating and/or vomiting frequencies were taken from diaries kept during therapy. Due to remote working, BMI used self-reported weight (taken by patients at each session) and height.

2.5 | The group CBT-T protocol

CBT-T is a 10-session form of CBT for non-underweight eating disorders, developed for delivery in one-to-one format (Waller et al., 2019). It centers on restoring nutrition and regulating eating patterns, reducing starvation and subsequent binge eating; inhibitory learning exposure to address anxiety; behavioral experiments to challenge specific beliefs about feared foods; approaches to emotionally triggered eating and related behaviors; individualized body image interventions; and relapse prevention work.

The CBT-T protocol for individuals was adapted by EM (CBT-T therapist, trained and supervised by GW) for group delivery by EM, retaining the structure and content of CBT-T with adaptations as detailed in Table 1. The Zoom platform was used to deliver therapy. Meetings were weekly. Patients self-weighed and reported their weight, and sent in weekly self-report measures by email. PowerPoint slides were used to guide sessions through the agenda. The adapted protocol and slides are available at: https://sites.google.com/sheffield.ac.uk/cbt-t.

TABLE 1 Adaptations made to CBT-T for group presentation.

Aspect of CBT-T group	Adaptations made
Introduction to the group	• Initial statement of the importance of group cohesion (mutual support to find solutions; positive reinforcement for group members' success; learning from each other) and group rules (respecting each other's experiences and differences; confidentiality; sharing experiences).
Tracking of symptoms	• Calculation and report of group mean weight change and binge/purge frequencies over the week. • Each patient met briefly and individually with the clinician online immediately prior to entering the online group session, and reported self-measured weight at that point and their behaviors over the previous week. This approach has the potential to limit the impact of weighing immediately after discussing diaries (i.e., maximizing expectancy violation), but was necessary to ensure that factors such as shame did not interfere with accurate reporting if it were done in a group setting. • At this point, the patient was also asked if there were any risk factors to consider (none emerged in the course of these groups). • Other self-monitoring (e.g., reviewing food diaries) and outcome of homework tasks (e.g., body image exercises conducted between sessions) were discussed with the rest of the group during each session, as per the individual CBT-T protocol. • Patients received a copy of their personal weight chart via email after each session, in order to make them feel more comfortable and reduce intragroup weight/behavior comparisons.
Maintaining individual focus during the group	• Each participant took time to describe their week, including homework set from the previous session. • Throughout the group therapy, each homework task was made as personal as possible, such as behavioral experiments for a participant's specific feared foods, even if that specific fear was not shared across the rest of the group.
Practical adaptations to implement in group form	• For each group, one or two members of staff were present. Where available, the second therapist's primary role was to ensure that the preliminary meetings (to obtain weight and symptom count, and to monitor risk) were expedited quickly, so that no therapy group time was lost. • Groups were led by EM, who had extensive experience in delivering one-to-one CBT-T, and who was supervised regularly by GW. • All 10 sessions were 90 min long, as recommended by Institute for Health and Care Excellence (2017) guidelines for group CBT-ED.

Abbreviations: CBT-T, ten-session cognitive-behavioral therapy for non-underweight eating disorders; CBT-ED, cognitive-behavioral therapy for eating disorders; EM, Elana Moore (first author); GW, Glenn Waller (second author).

TABLE 2 Eating and mood characteristics at baseline (Session 1) and the end of treatment (Session 10). $N = 8$ for all measures at both time points.

	Session 1		Session 10	
	M	(*SD*)	*M*	(*SD*)
EDE-Q Global	3.5	(0.5)	1.6	(1.1)
EDE-Q Restraint	2.5	(1.2)	0.8	(0.7)
EDE-Q Eating concern	3.4	(0.8)	1.1	(1.4)
EDE-Q Shape concern	3.9	(0.5)	2.2	(1.4)
EDE-Q Weight concern	4.1	(1.0)	2.4	(1.4)
Objective binge-eating frequency per week	3.4	(3.3)	0.3	(0.5)
Purge frequency per week	0.88	(1.5)	0	(0)
Depression (PHQ-9)	11.8	(2.1)	6.4	(4.4)
Anxiety (GAD-7)	11.0	(2.7)	5.9	(2.4)
Body Mass Index	27.6	(7.0)	27.8	(7.0)

Note: Objective binge-eating and purging frequencies taken from diary records.
Abbreviations: EDE-Q, Eating Disorders Examination-Questionnaire; PHQ-9, Patient Health Questionnaire (nine-item version); GAD-7, Generalized Anxiety Disorder scale (seven-item version).

2.6 | Data analysis

Data were analyzed using SPSS (v24). No patients dropped out or failed to complete measures, so no data were missing. In keeping with the preliminary nature of the study (i.e., not testing hypotheses) and the small sample size, scores were not compared statistically. However, mean scores at the beginning and end of treatment were used to indicate levels of change in EDE-Q, GAD-7 and PHQ-9 scores, along with frequency of binge eating and purging. Mean pre- and post-therapy EDE-Q Global scores were calculated for the BED and BN groups, to allow comparison of levels of change.

3 | RESULTS

3.1 | Acceptance and compliance

A total of 24 patients were offered group CBT-T, until each group (BN, BED) had $N = 4$. Sixteen patients did not take up the group therapy (four did not respond to contact; three needed to delay therapy regardless; three could not make the group times; three wanted one-to-one therapy; three wanted therapy in person rather than online). Therefore, the acceptance rate was 8/24 (33%). All participating patients were white, female adults. Once recruited, the compliance rate was 100%, as all eight patients completed all 10 group sessions.

3.2 | Feasibility

All patients who started therapy completed all the measures. They were able to: establish and maintain video connections; make the time to attend uninterrupted; and engage actively in the groups.

3.3 | Changes in scores across treatment

Table 2 shows the baseline (Session 1) and end of therapy (Session 10) scores for the whole group on eating attitudes (EDE-Q), eating behavior frequency per week, depression (PHQ-9), anxiety (GAD-7), and BMI. All of the scores apart from BMI showed positive clinical changes over time. Descriptively, we divided to the group into BN and BED and compared scores on the EDE-Q Global scores only. BN mean scores reduced from 3.5 ($SD = 0.3$) to 1.3 ($SD = 0.7$), while BED mean scores reduced from 3.5 ($SD = 0.6$) to 1.9 ($SD = 1.2$). Thus, there was a similar level of change across the two groups.

4 | DISCUSSION

This pilot study has examined the feasibility and acceptability of group CBT-T for non-underweight adults with BED and BN, delivered online. Acceptance was limited, as only a third of patients who were approached from the waitlist taking up the therapy. However, once patients started treatment, compliance and feasibility of the treatment were both strong. The participants were fully compliant with completing pre- and post-therapy measures.

As this was a pilot study, limitations mean that the results cannot be reliably generalized. The small sample limits the study's power, and the lack of a control group means the intervention's effectiveness cannot be assumed. Nor did the study examine the perspectives of patients and therapists on their experiences of this group format (e.g., greater group cohesion/support; anxiety about letting down other group members). Future research into group CBT-T should involve a qualitative arm, to determine whether patient experience reflects that in individual CBT-T (Hoskins et al., 2019).

It is also important to note the number of waitlist patients offered treatment ($N = 24$) was substantially larger than the number entering the groups ($N = 8$). While the clinic focused on work with non-underweight eating disorder patients, it was not possible to determine any more closely how representative this sample of eight patients was of the wider clinic population, or of the 24 approached to take part. This lack of comparability was enhanced by the condition that data could only be collected from those who chose to participate. The low acceptance level relative to that found in individual CBT-T and other individual therapies (Waller et al., 2018) limits the utility of group CBT-T in clinical settings, and impacts the viability of setting up future trials to determine group CBT-T's efficacy and effectiveness. Finally, it will be important to determine whether delivering such groups in-person post-Coronavirus restrictions impacts the acceptability and outcome of this telehealth approach.

These findings suggest that group CBT-T is worth further investigation with larger samples and in RCTs, to ensure that the outcomes are reliable and attributable to this specific intervention. The design of such RCTs needs to be considered, given existing effective treatments for such patients. A waitlist control group where those on the waitlist know that they will soon receive the full treatment would be appropriate to determine any placebo effect (as per Fairburn et al., 2009). An alternative approach would be to compare directly with individual CBT-T or to compare online versus face-to-face therapy, using a non-inferiority design with a much larger *N*. Such studies should include measurement of early change and follow-up, to ensure comparability with other treatments (Fairburn et al., 2009; Waller et al., 2018).

Such research should test the impact of group CBT-T for a more diverse population (e.g., younger, ethnically diverse, different genders and gender identities). In this instance, relatively small groups ($N = 4$) were piloted as an initial test of feasibility and acceptability. The similar reduction in EDE-Q Global scores for the BN and BED groups and the fact that both groups showed full compliance indicates that future RCTs should be developed around groups with non-underweight eating disorders, rather than specific diagnoses of BN or BED. However, the high compliance rate might be related to the small size of the groups yielding close working bonds between group members. Future research should determine whether larger groups have higher attrition rates.

A further consideration is whether there were any indications that feasibility could be enhanced going forward. Two issues arose that merit future consideration. First, three individuals were unable to undertake the group because it was at an inconvenient time. Earlier advertising of the group might have allowed them to take part, though that might also have delayed treatment for those who could already attend. Second, informing patients at assessment about the option of individual or group treatment could have allowed the service to offer treatment more efficiently. Finally, there was an exclusion criterion of severe purging behavior, limiting generalizability of the findings. However, the physical risks of severe purging and the limited opportunities to address those risks for the individual within a group setting mean that it is probably appropriate to retain this exclusion criterion in future clinical and research work on group CBT-T.

If these acceptability and feasibility findings are supported in future RCTs and effectiveness research, then group CBT-T might be particular suitable in specific clinical situations and for particular patients (e.g., those with limited funds, time and access to clinical services). The lower cost per patient, viability of online delivery (overcoming issues of distance from services) and relatively brief therapy duration of group CBT-T mean that both services and patients could benefit in terms of availability, cost and waiting times. The acceptance levels demonstrated here mean that this therapy will not be universally viable, but it still offers a treatment option to a wide range of non-underweight patients with eating disorders.

AUTHOR CONTRIBUTIONS

Elana Moore: Conceptualization; data curation; formal analysis; methodology; writing – original draft; writing – review and editing. **Glenn Waller:** Project administration; supervision; writing – review and editing.

FUNDING INFORMATION

No funding was sought for this work.

CONFLICT OF INTEREST STATEMENT

GW receives royalties from treatment manual used in this research. EM has no interests to declare.

DATA AVAILABILITY STATEMENT

Anonymised data are available to other researchers upon reasonable request.

ETHICS STATEMENT

Specific ethical approval was not required as the pilot study evaluated existing practice (National Health Service Research Authority, 2011). All patients gave written consent to take part and their outcomes to be anonymously analyzed and published.

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