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BRIEF REPORT

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Effectiveness of a brief form of group dialectical behavior therapy for binge-eating disorder: Case series in a routine clinical setting

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Abstract

Objective: While there is evidence to support the use of group dialectical behavior therapy (DBT) in the treatment of binge-eating disorder (BED), treatment is relatively long compared with other evidence-based treatments. This study explored the effectiveness of brief DBT groups for BED, delivered in a routine community setting.

Method: Eighty-four adults with BED entered 10-week DBT group treatment in a community eating disorders service. In total, 12 groups were conducted. Patients completed measures of eating disorder pathology, anxiety, depression, and emotional eating at the start and end of treatment, and at 1-month follow-up. Frequency of weekly binges was recorded.

Results: Outcomes were similar to those of longer versions of DBT, with an attrition rate of 26%, and significant reductions in eating disorder psychopathology and emotional eating by the end of treatment and at follow-up. Over 50% of patients were abstinent from binge eating by Session 4.

Discussion: Group DBT delivered in a 10-session format is clinically equivalent to longer versions of the same treatment. Future research is required to explore patterns of change and to demonstrate replicability under controlled conditions, but these findings are promising for the efficient delivery of effective treatment and reducing waiting times.

KEYWORDS

binge-eating disorder, brief treatment, dialectical behavior therapy, group therapy, service outcomes

1 | INTRODUCTION

Recent treatment guidelines (National Institute for Health and Care Excellence [NICE], 2017) for binge-eating disorder (BED) recommend guided self-help or cognitive behavior therapy for eating disorders (CBT-ED; group or individual). While these treatments lead to substantial improvement for many, a proportion of patients remains symptomatic following treatment (NICE, 2017). Consequently, there has been growing interest in whether other therapies can be adapted to treat BED. Given links between binge eating and poor emotion control, one such treatment is dialectical behavior therapy (DBT; e.g., Safer, Telch, & Chen, 2009), which aims to reduce binge eating by improving adaptive emotion-regulation skills.

Uncontrolled and controlled trials have shown positive outcomes from DBT guided and unguided self-help, as well as group-based interventions (Carter, Kenny, Singleton, Van Wijk, & Heath, 2020; Safer, Robinson, & Jo, 2010; Telch, Agras, & Linehan, 2001). More recently, the effectiveness of group-based DBT for BED (Safer et al., 2009) has been tested in a routine community setting (Blood, Adams, Turner, & Waller, 2020), yielding outcomes that closely mirror those from previous

studies. The attrition rate was similar to that reported by a controlled trial (Telch et al., 2001; 16 vs. 18%), and there were medium to large improvements in eating pathology, binge eating, and emotional eating. These findings lend further support to the notion that binge eating can serve as a maladaptive form of emotion regulation, and show that group DBT is an acceptable and effective treatment for this clinical group.

However, at a dose of 20 two-hour sessions, such group treatment is relatively expensive to deliver. Recent guidance recommends investigation into the effectiveness of brief psychological therapies for eating disorders (NICE, 2017), as they have the potential to lower costs, increase accessibility, and reduce waiting times. In the field of eating disorders, this approach has resulted in the development of a shorter version of CBT for non-underweight eating disorders, which has strong clinical outcomes and patient acceptance (Waller et al., 2018). In parallel with that development in CBT, it is clearly important to consider Safer et al.'s (2009) suggestion that DBT for BED should be trialled with fewer sessions, potentially improving cost-effectiveness, to determine whether clinical effectiveness can be maintained. Therefore, this study aimed to investigate the effectiveness of a 10-week group-based DBT intervention for BED, delivered in a routine out-patient community eating disorders service, comparing outcomes with those previously reported (e.g., Blood et al., 2020).

2 | METHOD

2.1 | Ethical considerations

Under the guidance of the UK National Health Service National Research Ethics Service (National Health Service Health Research Authority, 2011), this case series was deemed to be service evaluation, and did not require ethical approval. Patients were told that their anonymized clinical data would be used confidentially for clinical evaluation purposes.

2.2 | Participants

The sample consisted of 84 patients (79 females, 5 males) who had been referred to a specialist NHS community eating disorder service, and who were offered a place in a 10-week DBT-BED skills training group (between 2017 and 2019). Each was assessed using the diagnostic items of the Eating Disorder Examination, version 16 (Fairburn, 2008) or a semi-structured-interview (Waller et al., 2007). Using DSM-5 criteria (American Psychiatric Association, 2013), all patients met diagnostic criteria for BED.

2.3 | Measures

Measures of eating disorder pathology, anxiety, depression, and emotion regulation were collected at the start and end of the group, and at 1-month follow-up. Frequency of objective binge eating was taken from client reports of target behaviors, reviewed by group facilitators at the start of each session. Group members were given clear guidance regarding what constitutes an objective binge episode, and written criteria were provided with each weekly diary card, used to record target behaviors. The same self-report measures were used as in Blood et al. (2020), to ensure comparability. Self-reported weight and height were used to calculate body mass index (BMI).

2.3.1 | The Eating Disorders Examination Questionnaire

The Eating Disorders Examination Questionnaire (EDE-Q, version 6; Fairburn, 2008) was used to assess eating disorder psychopathology and behaviors. It measures the frequency of key eating disorder behaviors (e.g., objective binge eating) and attitudes (restraint, weight concerns, shape concerns, eating concerns). The Global attitude score was calculated from these subscales. The EDE-Q has adequate psychometric properties, and is suitable for use with BED patients (Reas, Grilo, & Masheb, 2006).

2.3.2 | The Hospital Anxiety and Depression Scale

The Hospital Anxiety and Depression Scale (HADS; Zigmond & Snaith, 1983) was used to measure anxiety and depression. The following total scores on each subscale indicate the following levels of anxiety and depression—mild = 0–8; moderate = 11–15; severe = 16–21.

2.3.3 | The Binge Eating scale

The Binge Eating Scale (BES; Gormally, Black, Daston, & Rardin, 1982) measures binge eating pathology. It has good psychometric properties, and reflects binge eating severity as measured by food records.

2.3.4 | The Emotional Eating Scale

The Emotional Eating Scale (EES; Arnow, Kenardy, & Agras, 1995) is a 25-item self-report questionnaire, assessing the use of eating to cope with negative affect (anger, anxiety, and depression). It has good psychometric properties, discriminant validity, and concurrent validity with self-reported binge frequency (Arnow et al., 1995).

2.4 | Procedure

Participants completed the EDE-Q, HADS, BES, and EES at the start and end of treatment (10 weekly sessions), and at 1-month follow-up. These measures were administered as part of routine clinical practice, to monitor treatment effectiveness.

2.5 | Intervention

The DBT delivered in this group was a condensed 10-session version of that described in a standardized manual (Safer et al., 2009). As part of treatment, all participants commit to addressing, in order of priority: any therapy-interfering behaviors; binge eating; mindless eating; urges to binge-eat; capitulating (wilfully shutting off all options other than to binge-eat); and apparently irrelevant behaviors (which might have a surface-level justification, but in fact increase the likelihood of binge-eating). Participants used tools such as chain analysis to identify the factors prompting them to engage in these behaviors, and to replace problem behaviors with more adaptive coping skills.

Each group session took 2 hr—an hour of structured feedback regarding target behaviors and skills use, followed by an hour of new skills teaching. The skills taught included mindfulness, emotion regulation, and distress tolerance. All of the skills outlined in Safer et al.'s (2009) 20-session treatment were included. The briefer format was achieved in a number of ways. A longer pre-treatment review appointment was offered, allowing clinicians to introduce the chain analysis tool on a one-to-one basis. Consequently, there was an earlier focus on skills teaching within the group. Core mindfulness skills were introduced earlier (Session 2) and covered over two sessions, rather than three. Emotion regulation skills were taught over three sessions rather than seven, and distress tolerance skills over two sessions rather than four. This shortening was made possible by combining the teaching of some related skills. For example, "radical acceptance" and acceptance of painful emotions are taught separately within the 20-session program, with the former being a broader distress tolerance skill, and the latter being taught as part of the emotion regulation module. Within the 10-session protocol, these were combined within a single teaching session, as applications of the same broad skill. Finally, within the 10-session format, there is less need for review sessions. The 20-session protocol includes skills reviews at Sessions 12, 13, 18, and 19. Within the 10-session program, patients were given the opportunity to review specific skills within the final session, and all were provided with a "re-cap pack," providing a brief reminder of the skills taught session-by-session.

Participants completed diary cards weekly, indicating the number of target behaviors (e.g., binges, mindless eating) that had occurred in the previous week. Participants also completed a record of their skills practice each week. Participants also attended an individual pre-group review and a 1-month follow-up session.

All groups were "closed". Each was led by a clinical psychologist or eating disorders therapist, and was co-facilitated by an assistant psychologist, all of whom received regular clinical supervision. Lead facilitators had received training in delivering this briefer version of DBT for BED, and attended monthly peer DBT supervision. To promote treatment adherence, session recordings were routinely used in supervision, and skills were taught following written agendas. Supervision was provided by one of the authors (G. A.), who has 10 years' experience of delivering and supervising DBT.

2.6 | Data analysis

Frequency of weekly objective binges was taken as the primary outcome measure, allowing symptom change to be tracked on a weekly basis. Other clinical change was measured by comparing scores on the EDE-Q, BES, EES, and HADS at baseline, end of treatment and 1-month follow-up. Analysis was conducted using Intention to Treat methods (multiple imputation, five imputations). Paired *t* tests were used to compare differences from the start of therapy to the end, and from the end of therapy to the 1-month follow-up. Effect sizes were Cohen's *d* ($d \geq 0.8$ is a "large" effect).

3 | RESULTS

3.1 | Participant characteristics

The mean age of the sample was 37.67 years ($SD = 11.82$, range = 18–63 years). Mean BMI at the start of treatment was 38.9 ($SE = 2.44$) and at follow-up it was 38.0 ($SE = 0.71$) indicating no significant change over therapy (Intention to Treat analysis, $t = 0.39$; *NS*).

3.2 | Attrition from treatment

Of the 84 participants who entered the DBT groups, all attended at least session 1. Twelve groups were conducted with a mean of seven participants in each (range 5–8). Twenty-two dropped out of treatment before completion (26.1% attrition).

3.3 | Treatment outcomes for eating pathology and mood

Table 1 shows scores on the dimensional measures (EDE-Q, BES, EES, and HADS) at each of the three time points (Intention to Treat analyses). There were significant reductions from the beginning to end of treatment on all of the EDE-Q scales, the BES, the EES Anger and Depression subscales, and the HADS Depression scale. There were no losses of effects by the 1-month follow-up. No significant reduction was found for anxiety (EES Anxiety subscale; HADS Anxiety subscale). With the exception of the EDE-Q Restraint and Eating Concern subscales, effect sizes were generally large for the eating variables (EDE-Q and the BES), and small to moderate for the EES Anger and Depression subscales.

Completer analysis (see Supporting Information A) showed a similar pattern for the eating variables, but indicated more of an impact on underlying emotional states, particularly anxiety. When group number was included as a covariate in the completer analyses, it was nonsignificant for all outcome variables ($F < 2.00$, $p > .15$ in all cases), indicating that there was no cohort effect. Supplementary analyses (available from the authors) also showed that BMI was not a significant covariate, and that removing the five male participants did not affect the outcomes in any way.

TABLE 1 Levels of eating pathology (EDE-Q scores), binge eating (BES scores), emotional eating (EES scores), and mood (HADS scores) among patients who started 10-session group DBT for binge-eating disorder (Intention to treat; *N* = 84)

	Measurement point						Paired *t* tests					
	Start		End		Follow-up		Start-end			End-follow-up		
	M	(*SE*)	*M*	(*SE*)	*M*	(*SE*)	*T*	*P*	*d*	*T*	*P*	*d*
EDE-Q												
Restraint	1.90	(0.18)	0.82	(0.29)	0.94	(0.28)	3.16	.005	0.373	0.30	NS	—
Eating concerns	4.16	(0.16)	1.96	(0.33)	1.60	(0.39)	5.85	.001	0.671	0.67	NS	—
Shape concerns	4.94	(0.12)	3.32	(0.19)	3.16	(0.75)	7.84	.001	0.866	0.22	NS	—
Weight concerns	4.86	(0.12)	3.24	(0.18)	3.15	(0.22)	8.80	.001	1.071	0.11	NS	—
Global	3.96	(0.10)	2.34	(0.16)	2.24	(0.24)	9.00	.001	1.087	0.37	NS	—
BES												
BES total	35.0	(0.72)	15.8	(2.11)	13.4	(2.94)	8.64	.001	0.979	0.35	NS	—
EES												
Anger	2.89	(0.08)	1.83	(0.28)	1.81	(0.29)	3.91	.01	0.417	0.01	NS	—
Anxiety	2.59	(0.11)	1.41	(0.64)	1.12	(1.10)	1.86	NS	—	0.25	NS	—
Depression	3.36	(0.09)	2.04	(0.37)	1.10	(1.68)	3.63	.003	0.379	0.53	NS	—
HADS												
Anxiety	13.6	(0.41)	10.3	(1.89)	8.40	(1.67)	1.74	NS	—	0.74	NS	—
Depression	10.9	(0.39)	7.29	(1.22)	5.28	(1.54)	2.99	.004	0.336	0.54	NS	—

Note: The dash is to signify that the DBT referred to in the paper is adapted DBT for Binge Eating Disorder (BED), as opposed to standard DBT.
Abbreviations: BES, Binge Eating scale; DBT-BED, dialectical behavior therapy for binge eating disorder; EDE-Q, Eating Disorders Examination Questionnaire; EES, Emotional Eating scale; HADS, Hospital Anxiety and Depression scale.

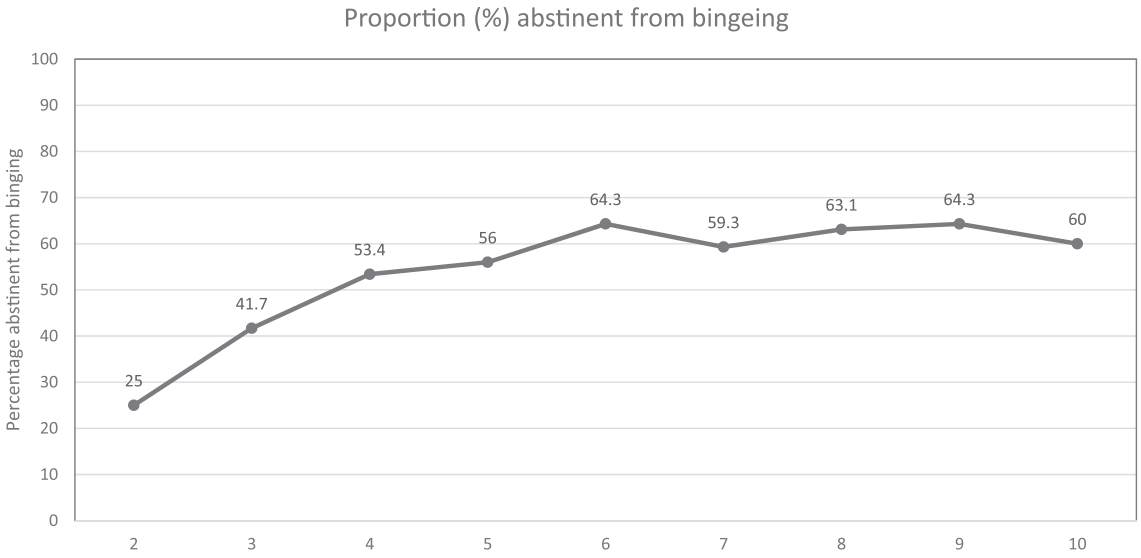

FIGURE 1 Pattern of change in abstinence across 10-session group dialectical behavior therapy for binge-eating disorder (ITT analyses)

3.4 | Abstinence from binge eating

Figure 1 shows the pattern of change in abstinence rates across the 10 weeks (ITT analyses). The percentage of participants who were abstinent from binge eating increased over the course of the 10 sessions, with more than half of that change having occurred by Session 4. At 1-month follow-up, 34/52 (65.38%) remained abstinent from binge eating.

4 | DISCUSSION

This study tested the effectiveness of a brief, 10-session version of group DBT for BED. Attrition was marginally higher (26.1%) than for the 20-session version (16.1%; Blood et al., 2020). While this is higher than rates reported in previous RCTs (e.g., Wilfley et al., 2002), it is notably lower than that reported by Klein, Skinner, and Hawley (2012) for DBT, and was lower than attrition rates typically reported in

routine community settings for CBT (e.g., Byrne, Fursland, Allen, & Watson, 2011). The outcomes were broadly comparable with previous studies (Blood et al., 2020; Safer et al., 2010; Telch et al., 2001). In the current study, 60% were abstinent from binge eating at the end of treatment and 65.38% (34/52) were abstinent at 1-month follow-up. These rates are close to the 60% (29/47) and 53% (23/43) reported by Blood et al. (2020), despite the much shorter treatment length. They are also broadly in line with abstinence rates in previous studies (e.g., 64%—Safer et al., 2010). Finally, there were significant improvements in eating pathology, binge eating pathology, emotional eating and mood, which continued into follow-up. The outcomes were in line with those reported by Blood et al. (2020) (e.g., follow-up BES 13.5 vs. 13.4; HADS anxiety 8.4 vs. 10.8; HADS depression 5.2 vs. 5.4). The lower impact on anxiety and mood might be explained by the focus of DBT on managing emotions, rather than changing the emotions themselves.

The pattern of change and abstinence from binge eating indicates the importance of early change (Vall & Wade, 2015) with over 50% of remission occurring by Session 4. This parallels previous findings, which have identified improved outcomes at end of treatment and 1-year follow-up for rapid-responders compared with nonrapid-responders (e.g., Hilbert, Hildebrandt, Agras, Wilfley, & Wilson, 2015).

This study had a number of limitations that are inevitable in a routine clinical setting, including a lack of formal adherence measurement and the lack of a control condition. The lack of service-level information (e.g., how many people were offered the group, how many accepted it, and how many were lost to the service while on the waiting list) all limit the generalizability of the findings to other settings, and such tracking data should be compiled in future research of this sort. Data related to weight and height were self-reported and the diagnostic assessment was conducted using one of two possible methods. Future work would benefit from direct measurement of BMI and the use of consistent and validated diagnostic assessment, as well as further detail regarding those who did not opt-in. This study also had a relatively short follow-up period, and future evaluations could extend the follow-up period, to ensure evidence of longer-term effectiveness. Given that this study was conducted in routine clinical practice, strengths include the relatively large sample size, the use of standardized measures, and regular group clinical supervision. Further research is needed to examine possible predictors of outcome (e.g., length of illness history; severity at baseline) and process variables (e.g., group cohesion; patient expectations regarding treatment suitability). This would require larger sample sizes and the use of covariate analyzes. Qualitative feedback regarding patients' experiences of the group would also enhance understanding of treatment suitability and acceptability.

The potential clinical implications of briefer, effective treatments for BED are important to consider. If the benefits of this brief version of DBT can be reproduced, the implication would be that patients can be treated effectively and in a cost-effective way, ensuring faster access to treatment for more patients. It might also have implications for group work with other eating disorders.

In summary, the current study provides initial support for the clinical effectiveness of a brief 10-session DBT group for BED. Results were broadly comparable to those reported for longer versions of DBT, with a significant percentage of participants being abstinent from binge eating before mid-treatment. Future research might usefully explore the processes of change, including the role of early change in determining outcome.

CONFLICT OF INTEREST

The authors declare no potential conflict of interest.

DATA AVAILABILITY STATEMENT

The data used are available from the corresponding author on reasonable request

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SUPPORTING INFORMATION

Additional supporting information may be found online in the Supporting Information section at the end of this article.

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