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<https://doi.org/10.1080/16506073.2024.2351867>

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**To cite this article:** Ella Keegan, Glenn Waller, Kate Tchanturia & Tracey D. Wade (09 May 2024): The potential value of brief waitlist interventions in enhancing treatment retention and outcomes: a randomised controlled trial, *Cognitive Behaviour Therapy*, DOI: [10.1080/16506073.2024.2351867](https://doi.org/10.1080/16506073.2024.2351867)

**To link to this article:** <https://doi.org/10.1080/16506073.2024.2351867>



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# The potential value of brief waitlist interventions in enhancing treatment retention and outcomes: a randomised controlled trial

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## ABSTRACT

People with eating disorders are often placed on lengthy waitlists for treatment. This is problematic, as increased time spent on waitlists has been shown to predict dropout. We examined whether providing brief interventions to people on a waitlist improved retention or outcomes in treatment. Participants ( $N = 85$ ) were referred to a university training clinic for 10-session cognitive behavioural therapy for non-underweight patients with eating disorders (CBT-T). While waitlisted for CBT-T, participants were randomised to one of two waitlist interventions or a control condition. In one waitlist intervention (CRT-Brief), participants received a cognitive remediation therapy session at the start of the waitlist period. In the other waitlist intervention (brief contact), participants were sent a short supportive email and psychoeducation halfway through the waitlist period. The control condition was waitlist as usual. There was no evidence to suggest that the waitlist interventions improved symptoms during the waitlist period or CBT-T. However, participants who received a waitlist intervention were three times more likely to complete treatment. The present study suggests that providing even brief contact while people are waitlisted for eating disorder treatment significantly improves retention. However, replication in a more adequately powered study is required.

## ARTICLE HISTORY

Received 30 August 2023  
Accepted 15 April 2024

## KEYWORDS

Waitlist intervention; retention; brief contact; cognitive remediation therapy; eating disorders; 10-session cognitive behavioural therapy

## Introduction

People with eating disorders are often placed on lengthy waitlists for treatment. This is problematic, as time spent on waitlists has been shown to predict dropout from cognitive behavioural therapy for eating disorders (CBT-ED). Specifically, O. Carter et al. (2012) examined the role of patient characteristics and process-based factors in dropout among people on a waitlist for CBT-ED. They found that people who dropped out spent longer on the waitlist than those who completed treatment. The COVID-19 pandemic

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**Submission to:** Cognitive Behaviour Therapy

 Supplemental data for this article can be accessed online at <https://doi.org/10.1080/16506073.2024.2351867>.

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compounded the issue of lengthy waitlists. For example, information gathered from 25 eating disorder services in Australia revealed increased demand for community and inpatient programs, with people waiting many months to access treatment (National Eating Disorders Collaboration, 2022). This reflects international figures showing quadrupled waiting times for treatment since 2019/2020 (Nuffield Trust, 2022), a 270% increase in people waiting for urgent treatment, and a 315% increase in people waiting for routine treatment (Iacobucci, 2021). Thus, it is clearly important to identify strategies to manage the impact of lengthy waitlists and retain people in treatment.

One potential strategy is to provide brief interventions while people are waitlisted for treatment. While brief interventions have a long history in emergency settings (e.g. Paul & van Ommeren, 2013), little robust evaluation of these approaches exists, and their potential is largely untapped in the eating disorder field (Wade et al., 2023). In a case series using comparison to a previous cohort, Fursland et al. (2018) evaluated the use of a single session intervention comprising assessment and psychoeducation among participants waiting for eating disorder treatment. They found that the intervention increased the likelihood of people entering treatment, and significantly decreased eating disorder psychopathology, clinical impairment, and depression.

It is likely that any waitlist intervention that is effective will be one that has wide-reaching impact for the individual in terms of broad learning or generalisable skills. Thus, an intervention targeting inefficient executive functioning may hold promise for eating disorders. To target these inefficiencies in people with anorexia nervosa, cognitive remediation therapy (CRT) was adjusted in the eating disorder context (Tchanturia, 2015). This adjunct treatment uses cognitive training exercises to “think about thinking,” and may improve retention in treatment (Hagan et al., 2020). A recent meta-analysis demonstrated that non-underweight people with eating disorders have executive functioning inefficiencies that do not significantly differ from those observed in people with anorexia nervosa (Keegan et al., 2021), suggesting that they too may benefit from CRT. Despite this, only four studies have examined the use of CRT in non-underweight people with eating disorders (Dingemans et al., 2014; MacNeil et al., 2016; Raman et al., 2018; Roberts, 2018). Moreover, all these studies used mixed samples, demonstrating the need for a study evaluating CRT predominantly among the non-underweight group.

Another realistic option is to provide a “brief contact” intervention. These interventions take the form of short supportive emails, SMS, letters, postcards, or phone calls inviting people to reengage with clinical services, expressing support, or providing brief psychoeducation. These interventions do not require a trained mental health clinician to implement, making them a cost-effective option. Brief contact interventions have previously been shown to reduce repetitions of deliberate self-poisoning (G. L. Carter et al., 2005) and suicidality (Tay & Li, 2022). Psychoeducational content emphasising the adaptability of genes and the brain may be useful for a brief contact intervention in eating disorders, as this content has been shown to significantly decrease disordered eating among women at risk of developing an eating disorder (Zhou et al., 2020) and restrictive eating among adolescents with depression (Schleider et al., 2022).

The present study evaluated the use of brief waitlist interventions using a randomised controlled trial (RCT). While waitlisted for 10-session cognitive behavioural therapy for non-underweight patients with eating disorders (CBT-T), participants were randomised to one of two waitlist interventions or to a control condition (waitlist as usual). The

waitlist interventions were CRT-Brief (a CRT session with accompanying homework) and brief contact (an email and psychoeducational content). We predicted that participants in the waitlist intervention conditions would be more likely to complete and do better in treatment than those in the control condition. We did not predict any differences between the waitlist interventions in terms of treatment retention or outcomes.

## Method

### *Power analysis*

We considered a moderate (0.50) effect size difference between the waitlist interventions and control condition to be clinically significant. A power analysis using a power level of 0.80 and an alpha of .05 revealed that 114 participants were required (Hedeker et al., 1999). The study was underpowered with a final sample of 85 participants.

### *Design*

The present study was conducted at the Flinders University Services for Eating Disorders (FUSED), a student training clinic in Adelaide, South Australia. People who were referred to FUSED were placed on an initial waitlist before assessment, with a median wait of 48 days (range: 2 to 449 days). As therapist availability appeared, people were invited to attend an initial face-to-face appointment. During this appointment, the information required to determine DSM-5 eating disorder diagnoses and eligibility was gathered using a semi-structured interview following a standardised outline (see Wade & Pellizzer, 2018). At the end of this appointment, people who were eligible were given one week to decide whether they would like to participate.

All people who decided to participate returned one week later for a second appointment and were randomised to one of three waitlist conditions: CRT-Brief, brief contact, or control. Block randomisation was conducted in Excel (block size = 4 participants) by the first author, who generated sealed envelopes containing group allocation for therapists to open. At the end of the second appointment, all participants were placed on a one-month waitlist. Following the waitlist period, participants in all three conditions received CBT-T. Participant flow is shown in [Figure 1](#). Ethics approval was obtained from the Social and Behavioural Research Ethics Committee at Flinders University (Project Number: 8613).

### *Participants*

The 85 participants were drawn from consecutive referrals to FUSED between June 2020 and March 2022. Inclusion criteria were: age  $\geq 15$  years; body mass index (BMI)  $\geq 18.5$ ; DSM-5 eating disorder diagnosis; willing for FUSED to communicate with their general practitioner; and agreed to commit to treatment. Exclusion criteria were: substance dependence; active psychosis; high suicidality; and difficulty understanding or speaking English. To manage demand, people with binge eating disorder and those already receiving eating disorder treatment were also excluded. Referrals came from the following sources: the Statewide Eating Disorder Service ( $n = 52$ ,

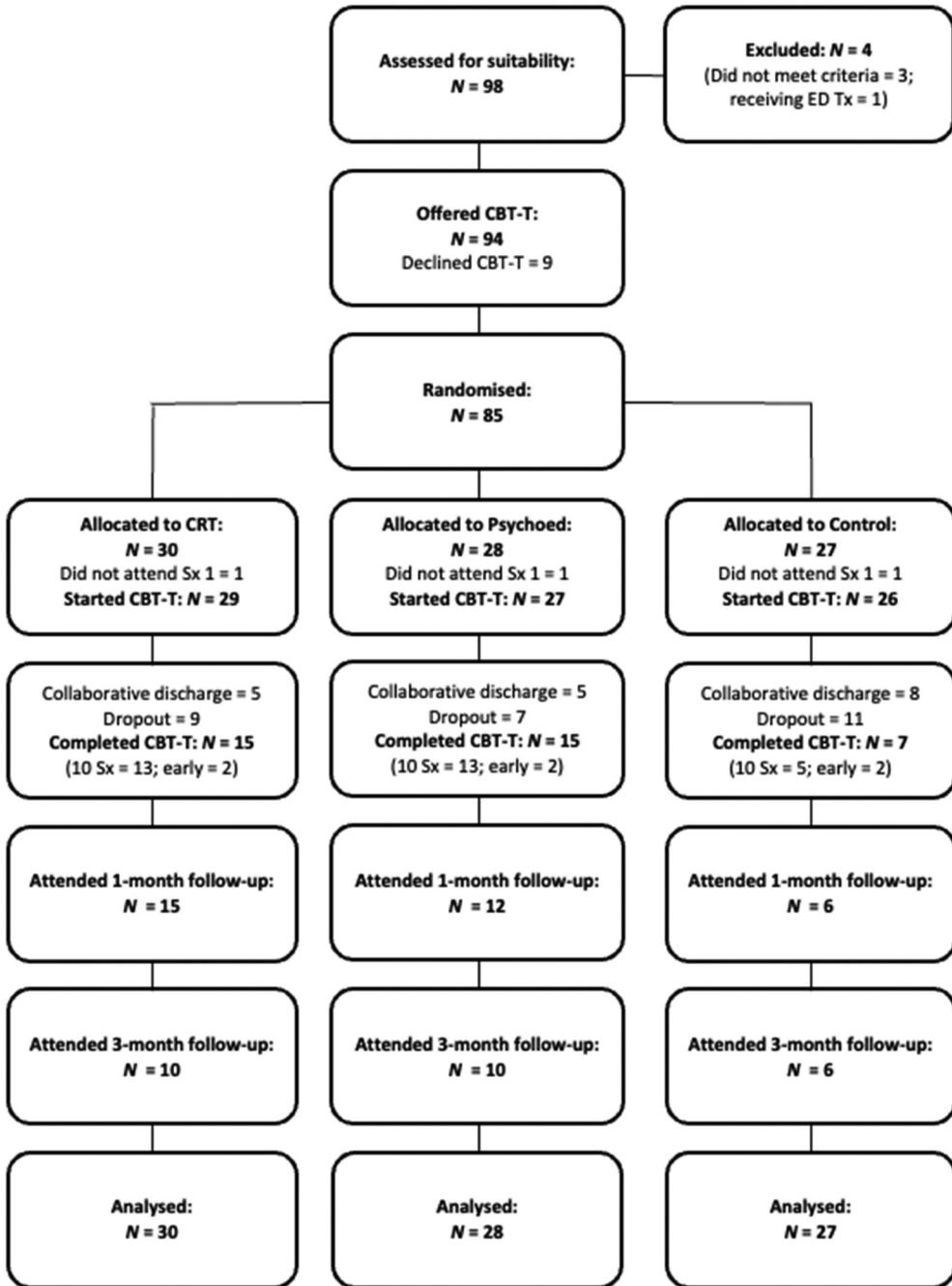


Figure 1. CONSORT flow diagram.

61.18%); self-referrals ( $n = 21$ , 24.71%); and other health professionals ( $n = 12$ , 14.12%). Four people with anorexia nervosa were included despite having a BMI less than 18.5 as they were medically stable and motivated to gain weight.

**Table 1.** Baseline demographic and clinical characteristics.

Characteristic	Whole sample ( <i>n</i> = 85)	CRT-Brief ( <i>n</i> = 30)	Brief contact ( <i>n</i> = 28)	Control ( <i>n</i> = 27)	<i>F</i> (df), <i>p</i>
Age (years)	24.57 (8.52)	22.95 (6.83)	23.81 (7.34)	27.13 (10.14)	1.91 (2, 84), .15
Sex (Female)	81 (95.3)	28 (93.3)	26 (92.9)	27 (100)	3.92 (4), .42
Ethnicity (Caucasian)	72 (84.7)	26 (86.7)	22 (78.6)	24 (88.9)	4.95 (8), .76
Duration (years)	8.52 (8.67)	7.82 (8.04)	7.24 (6.57)	10.62 (10.88)	1.15 (2, 79), .32
Global EDE-Q	4.31 (1.11)	4.24 (1.15)	4.53 (0.93)	4.17 (1.23)	0.84 (2, 82), .43
Objective binge episodes	7.99 (9.36)	10.23 (9.44)	6.37 (8.94)	7.11 (9.53)	1.24 (2, 81), .25
Vomiting episodes	7.88 (11.99)	9.80 (13.83)	7.43 (11.39)	6.22 (10.43)	0.66 (2, 82), .52
Laxatives	2.11 (6.39)	2.17 (5.50)	2.07 (6.82)	2.07 (7.08)	0.00 (2, 82), .99
Driven exercise	5.71 (7.77)	5.83 (7.29)	5.79 (8.25)	5.52 (8.05)	0.01 (2, 81), .99
BMI	26.42 (8.28)	25.46 (7.72)	27.99 (9.46)	25.88 (7.60)	0.76 (2, 82), .47
Global CIA	33.61 (7.51)	33.57 (7.85)	34.79 (7.63)	32.44 (7.07)	0.66 (2, 82), .52
DASS-21 total	69.62 (26.08)	70.33 (23.59)	72.43 (26.16)	65.93 (29.02)	0.44 (2, 82), .65
Diagnosis					8.82 (10), .55
AN	4 (4.7)	1 (3.3)	1 (3.6)	2 (7.4)	
BN	34 (40)	17 (56.7)	9 (32.1)	8 (29.6)	
OSFED	43 (50.59)	12 (40)	15 (53.57)	16 (59.26)	
UFED	4 (4.7)	0 (0)	3 (10.7)	1 (3.7)	
Self-harm	12 (14.1)	4 (13.3)	4 (14.3)	4 (14.8)	0.03 (2), .99
Suicidality	24 (28.2)	7 (23.3)	6 (21.4)	11 (40.7)	3.08 (2), .21

AN = anorexia nervosa; BN = bulimia nervosa; OSFED = other specified feeding or eating disorder; UFED = unspecified feeding or eating disorder. Differences between waitlist conditions were tested for using one-way ANOVAs for continuous variables and Chi-square analyses for categorical variables. For categorical variables, descriptive statistics are presented as *n* (%) and inferential statistics as  $\chi^2$  (df), *p*.

Demographic and clinical characteristics are provided in Table 1. There were no significant baseline differences between conditions.

## Waitlist conditions

### CRT-Brief

The first and last author developed CRT-Brief, a manualised waitlist intervention based on a 10-session CRT program (Tchanturia et al., 2010). This waitlist intervention comprised a therapist-led session and homework tasks. The session was provided at the start of the waitlist period (at the end of the second appointment) to allow time for homework completion. Prior to the RCT, CRT-Brief was piloted in a qualitative feasibility study (*N* = 8) at the Statewide Eating Disorder Service in April 2020. The eight participants (100% female) were attending a voluntary Day Program, described in Wade et al. (2020). Ages ranged from 15 to 30 years, and diagnoses included atypical anorexia nervosa and bulimia nervosa. Feedback on CRT-Brief was positive. All participants reported that the exercise instructions were clear and made sense. They also reported that they “really enjoyed” the session and said that it was “interesting,” “brain activating,” and “fun.” Participants liked that CRT-Brief did not discuss eating disorder related themes or symptoms, for example, “I liked that it didn’t challenge eating disorder things—it was a lot brighter.” During the waitlist period, participants in this condition were emailed weekly reminders to complete homework.

### Brief contact

Participants in this condition were sent a short supportive email and psychoeducation halfway through the waitlist period. The email read: “Hello [Name], We hope you are

well. Attached to this email is a handout that you might like to read. It discusses eating disorders, and the ability of the brain to recover and regenerate with regular eating. Kind regards, FUSED.” The psychoeducation was a Centre for Clinical Interventions handout “Eating Disorders and Neurobiology” (see Figure S1), outlining that recovery is possible with adequate renourishment. Participants in this condition were not contacted at any other times during the waitlist period.

### **Control**

The control condition was waitlist as usual. FUSED did not contact participants in this condition during the waitlist period.

### **CBT-T**

At the time of the RCT, FUSED was providing CBT-T. This manualised outpatient treatment retains many of the core elements of longer CBT-ED such as psychoeducation, nutritional change, collaborative in-session weighing, and comprehensive relapse prevention. CBT-T usually involves 10 sessions with two follow-up appointments. Treatment targets include establishing regular and adequate eating, eliminating binge eating and compensatory behaviours, tackling body image, and normalising thoughts and beliefs about food. A more detailed description of CBT-T is provided in Keegan et al. (2022).

### **Therapists and adherence**

CRT-Brief and CBT-T were delivered by the first author and seven provisional psychologists who were completing either their Masters or PhD in clinical psychology. All therapists received bi-weekly supervision from the second and last authors. During supervision, adherence was closely monitored using the CBT-T protocol: <https://sites.google.com/sheffield.ac.uk/cbt-t/resources?authuser=0> and a CRT-Brief therapist booklet developed for the study.

### **Assessment**

Measures were completed online using Qualtrics at six assessment points: baseline (first appointment), pre-treatment (Session 1), mid-treatment (Session 4), post-treatment (Session 10), 1-month follow-up, and 3-month follow-up.

### **Eating disorder psychopathology and bingeing frequency**

The global score from the 22-item Eating Disorder Examination Questionnaire (EDE-Q) was used to measure eating disorder psychopathology over the past 28 days (Fairburn & Beglin, 2008). The global score can range from 0 to 6. Higher scores indicate greater psychopathology. The global score has excellent reliability and correlates with the global score from the EDE interview (Mond et al., 2004). In the present study, internal consistency was  $\alpha = .78$ . The frequencies of objective binge episodes were also obtained from the EDE-Q.

### **BMI**

Height (m) and weight (kg) were used to calculate BMI as  $\text{kg}/\text{m}^2$ . Height was measured at baseline, and weight was objectively measured at baseline, each CBT-T session, and each follow-up appointment.

### **Clinical impairment**

The global score from the 16-item Clinical Impairment Assessment (CIA) was used to measure psychosocial impairment caused by disordered eating over the past 28 days (Bohn et al., 2008). The global score can range from 0 to 48. Higher scores indicate greater impairment. The global score has good reliability and correlates with clinicians' ratings of impairment (Bohn et al., 2008). In the present study, internal consistency was  $\alpha = .87$ .

### **Negative affect**

The total score from the 21-item Depression Anxiety and Stress Scale (DASS-21) was used to measure negative affect (Lovibond & Lovibond, 1995). The total score can range from 0 to 126. Higher total scores indicate greater negative affect. The total score has been shown to discriminate between clinical and non-clinical populations, and to correlate with other validated measures of depression, anxiety, and stress (Antony et al., 1998). In the present study, internal consistency was  $\alpha = .94$ .

### **Statistical analyses**

Analyses were conducted using IBM Statistical Package for the Social Sciences. Logistic regression was used to examine potential predictors of missing data. Treatment retention was defined as completing all 10 CBT-T sessions (unless an earlier finish was agreed upon as treatment had met the targets outlined above). Participants completing fewer than 10 sessions without collaborative agreement with their therapist were defined as dropouts. Logistic regression was used to examine whether retention differed between waitlist conditions. Linear mixed model (LMM) analyses were used to examine whether change over time in continuous treatment outcomes differed between waitlist conditions. LMM analyses assume data are missing at random and retain all participants even if they are missing data at different time points. All LMM analyses were adjusted for baseline observations and days on the initial waitlist. LMM was not used to analyse BMI as directional change is not predicted in the non-underweight group. Bonferroni corrections were applied for all comparisons. Given the transdiagnostic nature of the sample where only a proportion were experiencing each behavioural item, only completer objective binge episodes were examined using an ANOVA to test group differences. Within-group effect sizes were calculated as Cohen's  $d$  and were adjusted for the correlation between observations (Lakens, 2013). Cohen's (1992) benchmarks were used to interpret effect sizes as small (0.2), moderate (0.5), and large (0.8).

**Table 2.** Missing data analyses.

Baseline variable	Complete Data	Missing Data	OR (95% CI)
	<i>M</i> ( <i>SD</i> )	<i>M</i> ( <i>SD</i> )	
Age	24.50 (5.18)	27.13 (9.34)	1.04 (0.92, 1.19)
BMI	25.20 (7.98)	26.69 (8.37)	1.03 (0.95, 1.12)
Duration (years)	6.96 (6.90)	8.84 (9.00)	1.03 (0.95, 1.12)
Global EDE-Q	4.32 (0.96)	4.31 (1.14)	0.99 (0.59, 1.64)
Objective binges	4.47 (5.90)	8.75 (9.82)	1.07 (0.98, 1.16)
Vomits	4.40 (10.43)	8.63 (12.23)	1.04 (0.98, 1.11)
Laxative misuse	0.60 (1.60)	2.43 (6.98)	1.09 (0.90, 1.33)
Driven exercise	4.27 (5.23)	6.03 (8.22)	1.04 (0.95, 1.13)
Global CIA	34.33 (6.97)	33.46 (7.66)	0.98 (0.91, 1.06)
DASS-21 total	64.27 (18.17)	70.77 (27.44)	1.01 (0.99, 1.03)
Days on waitlist	54.00 (38.10)	62.33 (62.17)	1.00 (0.99, 1.02)

## Results

### Missing data

Waitlist condition did not predict missing data,  $Wald(2) = 2.81, p = .25$ . Additionally, as shown in Table 2, there were no significant baseline predictors of missing data, suggesting that data were missing at random.

### Treatment retention

Of the 82 people who started CBT-T, only 37 (45.12%) completed treatment. Completion rates were similar for CRT-Brief (51.72%) and brief contact (55.56%). In contrast, only 26.92% of participants in the control condition completed treatment. Given the equivalent results of the waitlist interventions, these two conditions were collapsed, and logistic regression showed that participants who received a waitlist intervention were three times more likely to complete treatment than those in the control condition (OR = 3.13, 95% CI = 1.14 to 8.63,  $p = .03$ ).

### Treatment outcomes

For continuous variables, both completer and intent-to-treat LMM analyses showed significant main effects of time (Table 3). These indicated that eating disorder psychopathology, clinical impairment, and negative affect significantly decreased over time

**Table 3.** Outcomes from LMM analyses.

Outcome	Main effects		Interaction
	Time	Waitlist condition	Time x waitlist condition
<b>Completer (<i>n</i> = 37)</b>			
EDE-Q	22.38 (4, 23.88) <.001	1.94 (2, 28.46) .83	0.19 (8, 23.64) .99
CIA	20.84 (4, 26.02) <.001	1.64 (2, 30.45) .21	0.39 (8, 25.92) .92
DASS	7.38 (4, 25.85) <.001	1.94 (2, 30.29) .16	1.78 (8, 25.54) .13
<b>Intent-to-treat (<i>n</i> = 85)</b>			
EDE-Q	34.09 (4, 29.52) <.001	0.25 (2, 48.18) .78	0.39 (8, 28.77) .92
CIA	28.04 (4, 32.87) <.001	1.82 (2, 46.50) .17	0.81 (8, 32.97) .60
DASS	11.05 (4, 27.59) <.001	1.89 (2, 47.03) .16	1.13 (8, 28.15) .37

**Table 4.** Change over time in treatment outcomes and within-group effect sizes.

Outcome	Covariates		Assessment Point <i>M (SE)</i>					Cohen's <i>d</i> (95% CI)		
	Baseline value	Days on waitlist	Pre-Tx	Mid-Tx	Post-Tx	FU1	FU3	Pre- to post-Tx	Pre-Tx to FU1	Pre-Tx to FU3
<b>Completer (n = 37)</b>										
EDE-Q	4.14	47.94	3.66 (0.14)	2.21 (0.19)	1.42 (0.24)	1.49 (0.24)	1.62 (0.36)	-1.52 (-2.12, -0.92)	-1.62 (-2.23, -1.02)	-0.66 (-1.20, -0.13)
CIA	33.65	47.94	28.10 (1.50)	19.95 (1.78)	11.23 (1.94)	12.45 (2.26)	9.87 (3.10)	-0.94 (-1.48, -0.40)	-0.85 (-1.36, -0.34)	-0.64 (-1.15, -0.13)
DASS	64.60	47.94	59.71 (2.30)	42.75 (3.36)	32.48 (4.83)	33.90 (5.57)	27.69 (6.88)	-1.07 (-1.62, -0.52)	-0.61 (-1.12, -0.09)	-0.57 (-1.11, -0.04)
<b>Intent-to-treat (n = 85)</b>										
EDE-Q	4.25	54.67	3.97 (0.07)	2.50 (0.16)	1.75 (0.21)	2.79 (0.21)	1.94 (0.32)	-1.15 (-1.60, -0.70)	-0.66 (-1.02, -0.31)	-0.51 (-0.87, -0.12)
CIA	33.58	54.67	31.11 (0.82)	21.24 (1.36)	13.10 (1.75)	13.67 (2.14)	13.52 (3.00)	-1.17 (-1.56, -0.79)	-0.72 (-1.08, -0.36)	-0.66 (-1.04, -0.28)
DASS	67.29	54.67	65.33 (1.62)	48.66 (2.69)	39.00 (4.38)	39.41 (5.09)	36.24 (6.75)	-0.75 (-1.10, -0.39)	-0.45 (-0.78, -0.11)	-0.35 (-0.69, -0.02)

Days on waitlist = days on initial waitlist prior to the first appointment; Tx = treatment; FU1 = 1-month follow-up; FU3 = 3-month follow-up. As there were no significant interactions between time and group, descriptive statistics are presented for the whole sample.

(Table 4). From pre- to post-treatment, effect sizes were very large for eating disorder psychopathology and clinical impairment, and medium to very large for negative affect. Moreover, the mean EDE-Q and CIA global scores began in the clinical range and fell below the clinical cut-offs of 2.77 and 16 at post-treatment. Objective binge episodes (over the past 28 days) reduced from a mean of 9.78 ( $SD = 12.88$ ) at baseline to 0.81 ( $SD = 1.68$ ) at end of treatment ( $ES = -0.57$ , 95% CI:  $-0.27$  to  $-0.90$ ). No other main effects or interactions were significant, and the reduction in objective binge episodes did not differ by group, indicating no impact of waitlist condition on outcomes. BMI data were available for 32 of the 37 completers. Among the non-underweight participants, BMI increased from pre- to post-treatment for 20 participants from 28.71 ( $SD = 9.76$ ) to 29.42 ( $SD = 9.79$ ), decreased for 10 participants from 29.87 ( $SD = 8.38$ ) to 29.11 ( $SD = 8.26$ ), and did not change for one participant (pre- and post-treatment BMI = 20.15). Only one of the four participants with anorexia nervosa completed treatment. This participant successfully restored their weight (post-treatment BMI = 19.25).

## Discussion

The present study examined the impact of waitlist interventions on treatment retention and outcomes. Contrary to Fursland et al. (2018), there was no evidence that receiving a waitlist intervention produced substantial improvements during the waitlist period or treatment. However, there was evidence that receiving a waitlist intervention improved

retention, with those in the waitlist intervention conditions being three times more likely to stay in treatment. This finding is clinically important given as many as one out of four clients can be expected to drop out of CBT-ED (Linardon et al., 2018).

We also found that the minimal waitlist intervention (brief contact) was as effective in improving retention as a more intensive waitlist intervention involving an in-person session and homework (CRT-Brief). This finding is consistent with research conducted among people with obesity, where minimal support (text messages not requiring a response) was found to be as effective in maintaining weight loss as more intensive support including therapist involvement (Zwickert et al., 2016). This finding highlights that waitlist interventions do not need to be resource-intensive or delivered by expert clinicians to be beneficial, thereby addressing concerns raised by Fursland and colleagues regarding clinician burden. Further research should investigate whether simply keeping in touch with clients over the waitlist period rather than providing an intervention or psychoeducation also significantly retains people in treatment.

The present study also fills a substantial gap in the literature by being the first to evaluate a form of CRT and a brief contact intervention in a sample predominantly comprising non-underweight people with eating disorders. Overall, we received positive qualitative feedback on CRT-Brief in the feasibility study. This aligned with research demonstrating that CRT is well-received by people with anorexia nervosa, parents, and eating disorder clinicians (e.g. Easter & Tchanturia, 2011; Giombini et al., 2017, 2018; Whitney et al., 2008). The present findings also provided further support for brief contact interventions (Tay & Li, 2022), and extended the use of these interventions from self-harm and suicide to eating disorders. Together, these findings provide justification for future work investigating the utility of CRT and brief contact interventions for non-underweight people with eating disorders.

More broadly, the present study adds to the growing evidence base for CBT-T. From pre- to post-treatment, we observed very large reductions in eating disorder psychopathology and clinical impairment, and medium to very large decreases in negative affect. These positive findings aligned with those reported in a recent meta-analysis of CBT-T (Keegan et al., 2022). Findings for treatment retention were less positive. Specifically, our dropout rate (54.88%) was substantially higher than the estimated dropout rate in the meta-analysis of CBT-T (39%), which was derived from 10 studies. This discrepancy suggests that the dropout rate in the present study was an outlier rather than reflecting the usual dropout rate from CBT-T. Reasons for dropout included fear of weight gain, physical illness, not feeling ready to make changes, and other commitments (e.g. work, study, and family). Taken as a whole, our findings suggest that CBT-T can produce clinically significant reductions in symptoms, but that future work is required to improve retention.

The results should be interpreted in the context of some limitations. First, we did not reach our planned sample size of 114 due to COVID-19 disruptions and data collection ending within the duration of the first author's PhD candidature. The study was, therefore, underpowered to detect a moderate between-group effect size. An additional limitation was the high dropout rate from CBT-T, further limiting power. Thus, replication in a more adequately powered study is required. The present study also did not measure homework compliance in CRT-Brief or whether participants in the brief contact intervention read and comprehended the psychoeducation. Future studies including

such measures are, therefore, required to determine whether it was the specific content of the waitlist interventions or simply keeping in touch with clients over the waitlist period that improved retention in treatment.

In conclusion, the present study examined whether providing brief interventions to people on a waitlist for CBT-T improved treatment retention and outcomes. While outcomes were not influenced, the waitlist interventions tripled retention in treatment. Comparability of CRT-Brief and brief contact suggests that such interventions do not need to be resource-intensive or clinician-led to be effective, and that simply contacting clients on waitlists may improve retention in eating disorder treatment.

## Acknowledgments

The authors would like to thank the provisional psychologists involved in the study: Nepheli Beos, Lara King, Marcela Radunz, Larissa Roberts, Kasia Robinson, Michelle Tonkin, and Madelaine de Valle.

## Disclosure statement

TDW and GW are co-authors of the CBT-T manual and KT edited CRT for eating and weight disorders.

## Funding

The first author was supported by an Australian Government Research Training Program Scholarship.

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## Data availability statement

Data are available at reasonable request.

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