

Response to Enhanced Cognitive Behavioural Therapy in an Adolescent with Anorexia Nervosa

Felicity A. Cowdrey

University of Bath, UK

Jennifer Davis

Salisbury District Community CAMHS, UK

Background: Few studies have examined the acceptability and usefulness of enhanced cognitive behavioural therapy (CBT-E) for adolescents with eating disorders (EDs). **Aim:** To investigate whether CBT-E was an acceptable and efficacious treatment for an adolescent presenting to a routine clinical service with an ED. **Method:** Daily self-monitoring records were completed during a baseline (A) and intervention (B) phase in addition to routine outcome measures. **Results:** There were reductions in both ED behaviours and “feeling fat”, and increases in weight after 11 CBT-E sessions. Progress was only partially maintained at 8-month follow-up. **Conclusion:** CBT-E may be an acceptable and useful intervention for adolescents with EDs.

Keywords: Anorexia nervosa, cognitive behavioural therapy, case report, adolescent, eating disorder

Introduction

Eating Disorders (EDs) are defined by a disturbance in eating habits and weight control behaviour that causes marked physical and psychosocial impairment. It has been argued that diagnostic systems that identify distinct EDs are a poor reflection of the clinical reality and in order to be of clinical value, researchers and clinicians need to think afresh about ED classification (Fairburn and Cooper, 2011).

One possibility is to take a “transdiagnostic” perspective. Fairburn, Cooper and Shafran (2003) have argued that central to all EDs is over-evaluation of eating, weight, shape and their control and it is this core psychopathology that drives ED behaviours. In line with this transdiagnostic perspective, CBT for BN has been “enhanced” so that it is applicable to all EDs. The treatment is thought of “enhanced” because, whilst the style resembles other forms of CBT, it incorporates novel strategies to target core psychopathology (Fairburn, 2008).

To date, little research has been conducted examining the efficacy of enhanced CBT (CBT-E) for adolescents. One study reported that after 40 weeks of CBT-E, two-thirds of the

Reprint requests to Felicity Cowdrey, Clinical Psychology Unit and Research Centre, University of Bath, Bath BA2 7AY, UK. E-mail: felicity.cowdrey@nhs.net. An extended version is also available online in the table of contents for this issue: http://journals.cambridge.org/jid_BCP

© British Association for Behavioural and Cognitive Psychotherapies 2016

adolescents with AN who completed the treatment showed significant improvement in weight and ED symptomatology which was maintained at 60-week follow-up (Dalle Grave, Calugi, Doll and Fairburn, 2013). However, CBT-E for adolescents has not been compared to CBT-BN or family-based interventions, which are the leading empirically supported treatments and recommended by national guidelines. Before such comparisons can be made, more research is needed to establish whether CBT-E is an acceptable, effective and economical option for adolescents with EDs, particularly when delivered by routine clinical services.

Case introduction and aims

K was an academically-gifted 15-year old girl who resided with her mum, dad and younger brother. K was referred to a community child and adolescent mental health service (CAMHS) by her general practitioner who was concerned about her low weight and reports of restriction and binge eating. Over the course of 12 months, K's weight dropped from 50 Kg to 42 Kg (significantly below what would be expected for her age and height). At the time of referral, K's weight was significantly below normal for her age and height (47 kg and on the 11th centile). She was alternating between periods of restriction and episodes of binge eating and purging (vomiting and laxative abuse). K was frequently weighing herself, checking her shape and engaging in driven exercise. K was able to articulate a number of eating, shape and weight related cognitions that focused on her being "fat" and "greedy".

The formulation indicated that the ED behaviours (restricting, bingeing and purging, excessive exercise and shape and weight checking) were a consequence of K's dysfunctional scheme for self-evaluation, which focused on eating, weight shape and their control. The ED behaviours in turn maintained and intensified the importance K placed on her eating, shape and weight. The aim of this case study was to investigate whether CBT-E would be an acceptable treatment for K and help obtain her goals of:

- Normalizing eating patterns and behaviours.
- Reducing thoughts about eating, shape and weight.
- Reducing the impact of the ED on social life and academic performance.

Method

Design

This study employed an A-B single-case experimental design where "A" referred to the baseline and "B" to the intervention phase. The baseline consisted of the 7 days between the initial assessment and the CBT-E assessment. Daily self-monitoring records were used as an outcome measure; the total number of ED behaviours (subjective or objective binge eating, vomiting, laxative use, restriction [defined as clear under eating such as missing meals or snacks] and excessive exercise) per day were counted and graphed. In addition, the comments and context column was coded for "feeling fat" (or similar statements). Weekly weights and standardized questionnaires (Eating Disorder Examination Questionnaire [EDE-Q], Revised Child Anxiety and Depression Scale [RCADS] and Strengths and Difficulties Questionnaire [SDQ]) were used to evaluate the intervention. The EDE-Q was also completed 8 months after the end of treatment. Therapist competency was assessed using the Child and Adolescent Practice Scale for CBT (CAPS). The therapist scored in the competent range across all areas

assessed by the CAPS. Parental consent and child assent was provided for treatment and for the use of the information for academic purposes.

Intervention

Treatment consisted of 11 sessions of individual CBT-E. In line with the “focused” CBT-E protocol (Fairburn, 2008), the following strategies were used:

*Formulation of the processes maintaining the eating problem (1–2)*¹. A visual representation of the processes maintaining the ED was developed.

Establishing real time self-monitoring (1 onwards). K was asked to start real time monitoring of food and drink consumed, ED behaviours, thoughts, feelings and events.

Collaborative weighing (1 onwards). K was weighed weekly in session and weight was plotted on a graph.

Regular eating (1 onwards). K was encouraged to adopt regular eating, which was defined as three meals and at least two snacks a day.

Psychoeducation (2–3). Education focused on eating problems generally, weight, weight checking and binge eating.

Motivation to change (4). The pros and cons of change, both currently and in the future, were considered.

Addressing feeling full (5–6). Strategies employed to address the aversive feeling of fullness included psychoeducation, normalizing the physical sensation of fullness, as well as practical strategies.

Involving significant others. Regular meetings were held with K’s parents. As well as informing them about the nature of K’s eating problem and treatment, consideration was given to how they could support K’s efforts to change.

Over-evaluation of shape and weight (6–10). K’s scheme for self-evaluation was identified using a pie chart technique. After identifying the importance that K placed on her ability to control her shape and weight, the risk of evaluating herself in this was considered. An extended formulation was created with K that included the consequences of over-evaluation. Two strategies were used to reduce K’s over-evaluation: (1) enhancing other domains of self-evaluation; and (2) addressing the expression of over-evaluation by working on shape checking and feeling fat.

Ending well (11). K’s progress was reviewed and a maintenance plan created.

Results

Figure 1 demonstrates counts of ED behaviours and feeling fat recorded on the self-monitoring records. K’s scores were variable during the baseline phase (A). There was a steep decline in counts during the intervention phase (B); by day, 38 (approximately CBT-E session 5) counts of ED behaviours and feeling fat had reduced to zero and this remained stable. It is also notable that feeling fat mostly co-occurred with counts of ED behaviours. K’s weight

¹ Numbers indicate the session number.

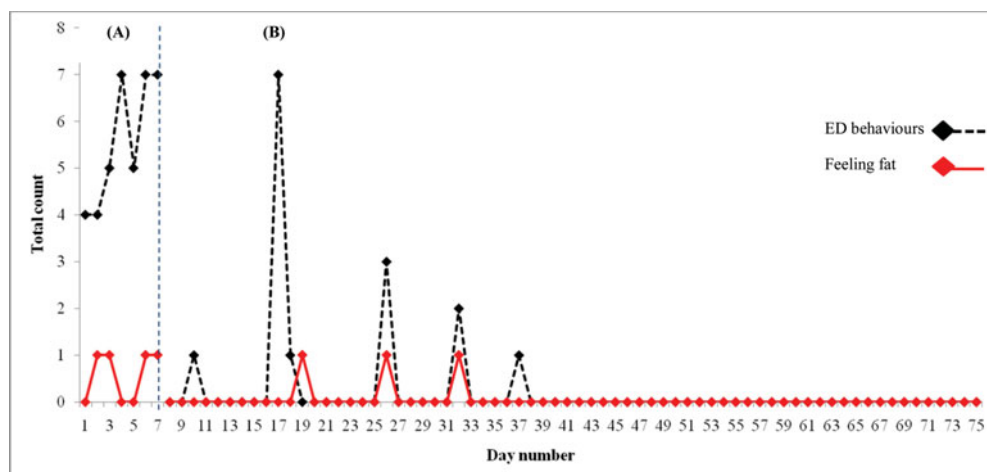


Figure 1: (Colour online) The total number of ED behaviours per day, recorded on self-monitoring records, was counted and graphed as “ED behaviours”. The comments and context column was coded for “feeling fat” (or similar statements). Daily counts of ED behaviours and “feeling fat” were graphed and used both in session and also for evaluation of the intervention.

increased from 47 Kg to 52.2 Kg (39th centile; the CAMHS ED clinic define good outcome as being above the 25th centile) by session 11,

K’s global EDE-Q score remained above the clinical cut-off (more than one standard deviation above the norm for adolescent females) at session 6 (Baseline Global EDE-Q = 3.5, Session 6 = 3.55) but reduced to below the clinical cut-off by session 11 (Global EDE-Q = 1.51). The ratings on the SDQ given by K’s parents decreased from 18 to 8 for total difficulties and 7 to 2 for impact of difficulties over the course of treatment. K’s ratings showed a similar trend over time. Ratings on the RCADS indicated that by session 11, K no longer fell in the clinical range for anxiety or depression (Anxiety rating: baseline = 81, session 11 = 61; Depression rating: baseline = 86, session 11 = 65). Qualitatively, by the end of treatment K felt as though the ED impaired her less socially and she was more able to concentrate at school. She had noticed improvements in her mood and reported having regular menstrual cycles.

Eight month follow-up data indicated that K’s global EDE-scores had increased again and were just within one standard deviation of norms for adolescent females (Global EDE-Q = 3).

Discussion

The marked reduction in ED behaviours and feeling fat and increases in weight at session 11 suggest that progress was made towards K’s first therapy goal, which was to normalize her eating patterns and behaviour. Further, there was a substantial reduction in self-reported symptoms of ED, which indicates that other aspects of ED psychopathology, such as over-evaluation of eating, shape and weight and their control, had been addressed. In addition, K was no longer experiencing clinically significant symptoms of anxiety and depression by session 11 of CBT-E. However, progress was only partially maintained at 8-month follow-up.

There is little research on the phenomenon of “feeling fat” yet this is something that is central to the maintenance of EDs (Fairburn, 2008). From Figure 1, it is clear that for K feeling fat fluctuated from day to day. This experience was often connected with ED behaviours, such as restricting or bingeing, which in turn were influenced by K’s mood state. Therefore, as K started regular eating and ED behaviours reduced, reports of feeling fat also declined. This suggests that without specifically addressing feeling fat, the frequency of this phenomenon can be reduced through behaviour change.

There was no change on the scores on the EDE-Q by session 6 despite a rapid decline in ED behaviours. This potentially has implications for the long-term trajectory of K’s ED. Research in adult ED populations has shown that rapid responders to CBT-E, operationalized as a reduction in global EDE-Q scores of 1.52 within the first 4 weeks of treatment, are more likely to achieve full remission (Raykos, Watson, Fursland, Byrne and Nathan, 2013). Using this criterion, K would be considered a non-rapid responder and therefore would have a less favourable prognosis. This may in part explain the increase in global EDE-Q scores at follow-up. However, caution has to be taken when generalizing from research conducted with adult ED populations, particularly as there is evidence that in adolescents with AN, weight-restoration is a more accurate predictor of long term outcome than EDE-Q scores (Lock et al., 2013). In order to aid clinical decision-making, further research in adolescents is needed to examine what factors distinguish good versus poor outcome following CBT-E. Similarly, more guidance is needed on modifying CBT-E for use with adolescents accessing CAMHS. It would also be beneficial for a specific measure of therapist competency to be developed for the use of CBT-E with young people as the CAPS measures more general therapeutic competency.

There were some deviations from the treatment protocol. Due to service-level limitations in addition to K’s own time commitments, it was not possible to offer the twice-weekly appointments during the first stage of treatment as is recommended. Given that K was motivated to change and able to achieve early change, it was collaboratively decided that one session per week would be appropriate, given the difficulties identified above. Similarly, K completed only 11 sessions of CBT-E. This is a significant deviation from the recommended 20 or 40 sessions (Fairburn, 2008). Unfortunately, the therapist left the service shortly after the eleventh session. K was offered further sessions from the therapist supervising the case; however, K felt in a position to keep progressing without further therapeutic input.

The fact that the beneficial effects of treatment were not sustained at 8-month follow-up is perhaps unsurprising given that K received only 11 of the recommended 20 or 40 CBT-E sessions. It is likely that reducing the protocol did not equip K with the techniques to prevent relapse longer term. Further sessions would have allowed more time to address the key maintaining processes: over-evaluation of shape and weight and dietary rules. It is noted in the CBT-E manual (Fairburn, 2008) that patients are at substantial risk of relapse if these maintaining mechanisms are not sufficiently addressed. The finding reported highlights the importance of delivering the recommended number of sessions.

Conclusions

This case demonstrates how CBT-E led to a rapid reduction in ED psychopathology in an adolescent with AN but the effect was not maintained at follow-up. Whilst caution has to be taken due to the limitations of a single-case study, it illustrates that CBT-E may be an

acceptable and useful intervention for adolescents with EDs but that treatment should be offered in line with the CBT-E manual.

Acknowledgements

We are grateful to Dr Maria Loades for her helpful feedback on the draft of this manuscript.

Financial support: This research received no specific grant from any funding agency, commercial or not-for-profit sectors.

Ethical standards: The authors assert that all procedures contributing to this work comply with the ethical standards of the relevant national and institutional committees on human experimentation and with the Helsinki Declaration of 1975, as revised in 2008.

Conflict of interest: The authors have no conflicts of interest with respect to this publication.

References

- Dalle Grave, R., Calugi, S., Doll, H. A. and Fairburn, C. G.** (2013). Enhanced cognitive behaviour therapy for adolescents with anorexia nervosa: an alternative to family therapy? *Behaviour Research and Therapy*, *51*, R9-R12.
- Fairburn, C. G.** (2008). *Cognitive Behavior Therapy and Eating Disorders*. New York: The Guilford Press.
- Fairburn, C. G. and Cooper, Z.** (2011). Eating disorders, DSM-5 and clinical reality. *The British Journal of Psychiatry*, *198*, 8–10.
- Fairburn, C.G., Cooper, Z. and Shafran, R.** (2003). Cognitive behaviour therapy for eating disorders: a “transdiagnostic” theory and treatment. *Behaviour Research and Therapy*, *41*, 509–28.
- Lock, J., Agras, W.S., Le Grange, D., Couturier, J., Safer, D. and Bryson, S.W.** (2013). Do end of treatment assessments predict outcome at follow-up in eating disorders? *International Journal of Eating Disorders*, *46*, 771–778.
- Raykos, B.C., Watson, H.J., Fursland, A., Byrne, S.M. and Nathan, P.** (2013). Prognostic value of rapid response to enhanced cognitive behavioral therapy in a routine clinic sample of eating disorder outpatients. *International Journal of Eating Disorders*, *46*, 764–770.