In: Treatment and Recovery of Eating Disorders
Editors: Daniel Stein and Yael Latzer
ISBN: 978-1-61470-259-7

Chapter 8

COGNITIVE BEHAVIOUR THERAPY FOR BULIMIA NERVOSA, ANOREXIA NERVOSA AND THE NEW 'TRANSDIAGNOSTIC' APPROACH

Phillipa Hay[1§§] and Stephen Touyz[2]

[1] Foundation Chair of Mental Health, School of Medicine, University of Western Sydney, NSW, and Adjunct Professor of Psychiatry, School of Medicine, James Cook University, Townsville, Australia

[2] Professor of Clinical Psychology and Honarary Professor in the Discipline of Psychiatry, University of Sydney and Director of the Beumont Centre for Eating Disorders, Baulkham Hills, Sydney, NSW, Australia

Abstract

Specific and efficacious forms of cognitive behaviour therapy (CBT) have been developed for bulimia nervosa, anorexia nervosa and other eating disorders. Indeed the most recent refinement has been a 'transdiagnostic' CBT for all eating disorders. This chapter discusses the most well tested and manualised CBTs for eating disorders, their theoretical basis, evidence and principles of treatment. Specific issues for the overweight patient are also discussed and further reading recommended.

Keywords: psycho-education, monitoring, behavioural experiments, schema therapy, relapse prevention

Introduction

Cognitive Behaviour Therapy (CBT) combines behavioural experiments with rational disputation of patients' beliefs. The former experiments act to help patients disconfirm their original assumptions and confirm alternative attitudes. Following the seminal work of Beck and others, Fairburn developed CBT for the newly described 'bulimia' and subsequent

§§ E-mail address: p.hay@uws.edu.au

bulimia nervosa (BN) in the 1980s, the therapy later known as CBT-BN (1). At the same time Garner and Bemis (2) also developed a longer term (1-2 years) CBT for anorexia nervosa (AN). Both have undergone refinement but CBT-BN has two attributes which place it at the leading edge of psychological therapies in eating disorders (EDs), namely it has evolved into a 'transdiagnostic' ED therapy, and it has been tested comprehensively in randomised controlled trials (3). For this reason this chapter will first discuss CBT-BN and next CBT for AN.

CBT for Bulimia Nervosa (CBT-BN)

CBT for BN developed out of a theoretical understanding of the origin of disordered eating and weight and shape concern based on a cycle of binge-eating followed by extreme dieting and/or weight-control behaviours which exacerbate extreme weight concern and reinforce in its turn the ED behaviours. This cognitive model was first introduced by Fairburn three decades ago (1). It has since been refined, extended and adapted but the core dieting/binge-eating/extreme weight-control behaviours cycle remains (4). In clinical practice therapists may adapt this so that a personalised schema is presented that includes early life experiences and other factors such exposure to a 'dieting' environment (e.g. ballet dancing school) that may have pre-disposed or place the person at risk of an ED.

CBT-BN is also easily adapted to patients with an ED who may not have all DSM diagnostic criteria for BN (3) but have like features i.e. those with EDNOS or BED who suffer from behaviours such as binge-eating and/or vomiting, laxative misuse, extreme exercise for weight and shape reasons, and severe restrictive dieting or fasting, in association with weight and shape concerns that are characteristic of an ED. Although lacking 'evidence', CBT is also sometimes used for patients who suffer from one or more of these behaviours but have primarily another psychological problem such as borderline personality disorder.

Generally evidence of efficacy of CBT for BN is good and it is the leading treatment recommended by national guidelines such as the National Institute for Clinical Excellence Guidelines (5). It has been tested in many randomised controlled trials (RCTs) comparing CBT-BN as developed by Fairburn et al, and variations of such CBT to wait list control groups, other psychotherapies, and pharmacological therapies (6). A number of systematic reviews have been conducted with all consistently finding CBT to be well supported (7). In these reviews (5,8-9), CBT has been found to be superior to wait list control groups with abstinence rates of forty percent or more at the end of treatment, compared to much lower (as low as 10%) abstinence rates for wait list control groups. It has also been found superior to other psychotherapies, most notably interpersonal psychotherapy, in the short-term. However, at one year follow-up, trials have found reduced differences in outcomes between CBT-BN and interpersonal psychotherapy (10). CBT has also been found to be effective compared to pharmacotherapy, most notably anti-depressant therapies (11), and attrition rates are notably higher in anti-depressant control groups.

Classic CBT for BN as developed by Fairburn and colleagues (12) is conducted over a series of twenty sessions that initially may be twice-weekly, decreasing to weekly and then having one or two follow-up sessions over a period of around four months. It is presented in four stages, the first being psycho-education, the second monitoring of eating behaviours, the

third introducing behavioural experiments to prevent ED behaviours and promote self-control, and the fourth comprising cognitive challenging of ED attitudes.

In the first education phase, the patient is provided with information about BN and related EDs and an introduction to a personalised CBT formulation in diagrammatic form with the diet-binge-purge cycle at its core. Examples of such formulations can be found at the following website: www.psych.ox.ac.uk/credo/cbt_and_eating disorders. Specific discussion addresses the role extreme dieting plays in leading to binge-eating which often includes results of research studies of starvation (e.g. the classic study of Keys (13) or more recent laboratory research). Such an understanding of the antecedents to binge-eating is usually very well-received and provides some mitigation of the person's associated distress and self-disgust. The capacity for insight into the way early life experiences or their social and interpersonal context may have contributed to the onset of an ED is also often helpful in therapy.

The second phase of therapy starts with the behavioural monitoring and recording of eating and weight control behaviours. Patients often find keeping this distressing and need to be reassured of its core role in therapy. Forms are standardised but can be adapted into journal format and can be downloaded from the former website (see above). Records are reviewed at each session. The next step is instituting a meal plan of regular eating e.g. three meals and two snacks per day combined with dietary education. It is essential to avoid long periods without eating as this exacerbates the diet-binge cycle. The mid-phase of therapy focuses on cognitive strategies such as Socratic questioning and challenging of beliefs and attitudes which reinforce ED behaviours, such as valuing oneself according to one's weight and shape and "all or nothing" dichotomous thinking. Problem-solving is also usually incorporated here comprising the five steps of defining the problem, generating a solution, listing advantages and disadvantages of each, choosing a solution and trying it out and reviewing it and, if unsuccessful, revisiting other solutions. A good supplementary book for patients at this stage is the CBT self-help manual by Waller and colleagues (14) which also is a useful guide through therapy for carers.

The final phases of CBT involve relapse prevention and review of 'lapses'. Here advice is given that lapses will always occur but the patient will not resume "baseline" levels of binge-eating and purging. Patients may compile a record of strategies that have successfully helped them, such as monitoring and distractions at times of vulnerability to binge-eating. The use of relaxation, slow breathing and other anxiety management and coping strategies can also be usefully introduced during these later points in therapy.

The goal of therapy is normalising eating patterns and reducing extreme weight and shape concerns by identifying disrupted core beliefs and developing new coping mechanisms dealing with the impaired automatic way of thinking. By the end of therapy, the goal of a regular pattern of eating of varied and normal-sized food portions should be achieved. Binge-eating and self-induced vomiting and other behaviours should be reduced or absent and food, eating and weight no longer central to the patients self-view and self-esteem.

CBT-Extended or the trans-diagnostic approach

Fairburn has developed an extended manualised therapy (CBT-E) for all forms of an ED. CBT-BN is extended to include modules that address pre-disposing and, importantly

perpetuating or maintaining factors for the ED (3). CBT-E has an additional core module for management of mood intolerance and three optional modules attending to issues in interpersonal relationships, clinical perfectionism, and low self-esteem. A full account and comprehensive treatment manual is found in the text by Fairburn (4).

The efficacy of CBT-E has been tested in a 2-site 20-week treatment and 60 weeks closed follow-up RCT with 154 normal weight ED patients (38% with BN) where it was found to offer advantages for those with more complex additional psychopathologies who appeared to benefit from the additional modules. For those without such problems however there were no differences in outcomes (15). Results for the underweight patient have not yet been reported (see below).

In the additional mood intolerance module, it is recognised that there are several ways mood and eating may relate. For example, people with anorexia may eat less to gain a sense of control over external events, or to demonstrate distress, defiance or anger. Emotional overeating is often found in those who are overweight and binge eating with or without vomiting or compulsive exercise may occur to cope with negative moods or adverse events. Education about the relationship(s) between moods and eating is provided, and explored with the patient. Problem solving and alternate mood modulation strategies are introduced and practiced via behavioural experiments that are encouraged, monitored and reviewed.

Self-esteem is addressed through exploring and challenging the cognitive schemas that promote core beliefs e.g. selective attention to information that supports a negative view of self-worth. Encouraging new activities and friendships and working on interpersonal relationships is also helpful. The specific interpersonal module closely follows that developed by Fairburn and colleagues as a stand alone control therapy for CBT-BN (16). Clinical perfectionism and the need to attain this through the ED is explored in a formulation that mirrors that of the role of over-concern about weight and shape on promoting ED behaviours. Perfectionism in ED is regarded as 'clinical' when it is so extreme that patients can never be satisfied with an achievement and any error is intolerable. In therapy mistakes can be 'reframed' as '*inevitable'* because '*no-one can be perfect - to err is human'*, and mistakes are important and necessary to provide opportunity for new learning.

CBT for anorexia nervosa (CBT-AN)

The central goal of CBT in AN is the normalization of eating behaviour to ensure consistent weight gain and medical stability to achieve a healthy weight with specific focus on the interaction between the thoughts, emotions and behaviours that are the core psychopathology of AN. Garner, Vitousek, and Pike (1997 page 109(17)) postulated the following principles of CBT in AN:

(i) *the acceptance of conscious experience rather than unconscious phenomena.*
(ii) *focus upon belief, assumptions, schematic processing and meaning systems as mediating variables for maladaptive behaviours and emotions.*
(iii) *the employment of questioning as a prominent therapeutic strategy.*
(iv) *active participation by the therapist in treatment*
(v) *the essential contribution of homework sessions including self-monitoring*

The seminal CBT of Garner and colleagues (17) has been manualised and developed further by Pike and colleagues (18). This manualised CBT-AN follows three clearly defined phases of treatment:

Phase I: Building trust and setting treatment parameters. Here the principal goals are to build a positive therapeutic alliance, exploring and identifying the key features of the ED, providing education about starvation symptoms and other related topics, giving a rationale and advice for restoring normal nutrition and body weight, and prescribing eating patterns and establishing a regular eating pattern. Dietary restriction is addressed and patients are advised to eat regular meals at regular times and gradually increase portion sizes. Psycho-education about starvation and effects of AN is also important at his stage. (An excellent source is found in Garner (19)). This phase emphasises the need for the patient to move into an 'action' stage of change and motivational enhancement therapeutic strategies such as decisional analyses are utilised to help achieve this. This is crucial as outcomes are poorer where there is poor motivation to change and the majority of patients with AN who come for therapy are at a pre-contemplative or contemplative stage of change.

Phase II: Changing beliefs related to food and weight, then broadening the scope of therapy. The goals here are to continue the emphasis on weight gain and normalising eating and to bring these about by reframing relapse, identifying dysfunctional thoughts, exploring negative schema and thinking patterns, developing cognitive restructuring skills, modifying self-concept, and (like CBT-E above) developing an interpersonal focus in therapy.

Phase III: Preventing relapse and preparing for termination. Here the therapist clarifies the changes the patient has made, and prepares the patient for residual problems that may be found once therapy has concluded.

It must be emphasised that CBT-AN is also most appropriately and safely delivered within a multi-disciplinary context. This is where a physician will provide advice and monitor medical status (20) and if possible a dietician will provide expert and individualised nutritional advice.

There is small but mixed evidence base for CBT-AN in AN. Channon and colleagues (21) in a non-blinded RCT compared CBT to behaviour therapy alone and to a control "eclectic" therapy in 24 of 34 outpatients. Outcomes for participants in all treatment groups did not differ but improvements were modest. Serfaty and colleagues (22) compared a form of CBT over 20 weekly sessions with dietary advice in 35 patients followed to 6 months and no patients in the dietary advice group completed therapy. Those in the CBT arm had improved in ED and depressive symptom severity, and body mass index (BMI), but the mean BMI was less than 18. McIntosh and colleagues (23) in a small 20-week three armed study found that a manualised CBT was associated with a greater number of people rated as significantly improved (1 or 2 on their global scale) than those in the interpersonal psychotherapy group but differences were not significant for other outcomes. However, CBT was not associated with better outcomes compared to those in the control specialist supportive clinical management therapy. Finally, Pike and colleagues (24) found in 33 patients that CBT-AN had a better outcome and longer time to relapse when compared to nutritional counselling therapy following hospital care and weight gain restoration.

The transdiagnostic CBT (CBT-E) developed by Fairburn and colleagues (4) is extended from CBT-BN (see above) but incorporates a module on therapy in the underweight

"underweight and under-eating". This has many features similar to the CBT-AN of Pike and colleagues (18) but the focus is more on behavioural change (and monitoring of behaviours that reinforce the ED psychopathology such as body checking) and motivational enhancement strategies (excepting a decisional analysis) are not emphasised. Both therapies have monitoring weight as essential. CBT-E is more prescriptive of calorie needs, use of energy dense drinks to help achieve this, and a goal to 'maintenance' BMI of 19-20 with a weight gain of approximately 500 grams per week for outpatients. CBT-E recommends involving caregivers so that they help support the patient with all matters regarding food and eating in both psychological and pragmatic ways e.g. cooking with the patient. Randomised trials of CBT-E have been conducted but are yet to be published.

CBT in overweight patients

CBT for overweight patients was first described by Cooper & Fairburn in 2000 (25), with a program that is focussed on reducing weight loss to 5-10% and preventing weight regain or maintaining weight loss at the end of program. The style resembles CBT-BN. The treatment structure includes 24 sessions over an 11 month period, on a one-to-one basis. The program is based on two phases and nine modules, allowing the treatment to be tailored to the individual. The first and second phases are similar to CBT-BN, with the third phase focussing on weight maintenance and prevention of weight gain. However, in a longer term follow-up (26) of a randomised controlled trial comparing the CBT to guided self-help results were disappointing. In this trial at 3-years there were no differences between groups and most weight lost was regained by participants.

Patients who are overweight or obese and have an ED, such as binge eating disorder will benefit as well from CBT-E (4) as described above. In addition they may also need a supported weight loss program, particularly those patients with weight related medical problems such as diabetes or high blood pressure. In many cases, even a small weight loss such as the loss of 5-10% body weight, could reduce the risk of developing diabetes and/or cardiovascular diseases (27, 28). Patients should be therefore encouraged to set modest weight loss goals. This is important as studies investigating weight regain following obesity treatment, have found that those people who regain weight were the ones who set unrealistic weight goals and did not reach these goals (29). Weight loss advice and treatment should also take care not to undermine CBT for the ED. Strategies employed to assist the patient achieve modest weight loss include; increasing physical activity that is not compulsive but enjoyable and preferably sociable (e.g. tennis versus solitary gym exercises), minor alterations to meal and snacks choices to ensure meal patterns and portion sizes are in line with dietary guidelines, education on how to read nutrition information panels on processed foods to enable clients to make informed decisions when choosing between two or more similar products, and strategies to modify 'unhealthy' patterns such as eating when stressed or habitually overeating when not hungry. A helpful book incorporating many of these and others such as 'mindful eating' is the text by Kausamn (30) "If not dieting then what". Core to this is the framework that physical health and a healthy diet are not realised by any absolute weight but may be found within a wide range of BMI.

Conclusions and Discussion

Forms of CBT have been developed as a treatment for bulimia nervosa, anorexia nervosa, binge eating disorder and weight disorder. Classically CBT in eating disorders will have an initial psycho-education and motivational phase which is followed by normalisation of eating with behavioural experiments and strategies to address body image and other typical cognitive schema. Therapy closes with preparation for termination and relapse prevention techniques. CBT may often be supplemented with other approaches including emotion regulation skills training, strategies to improve self-esteem and reduce extreme perfectionism and interpersonal therapy. All these are features of the extended to a transdiagnostic CBT-E (4).

The evidence base is strongest for specific CBT-BN and its next generation CBT-E (1,4). Long-term (5-year) maintenance of change has also been reported for CBT-BN (31) and it is generally regarded as 'first-line' treatment for BN. Evidence is present but weaker for CBT-AN and CBT used in other eating disorders. CBT has been developed for obesity but long term maintenance of weight loss has not been found. Further research is needed to establish the efficacy compared to other psychotherapies of CBT-AN and CBT-E in underweight patients.

Suggested Reading

Touyz S, Polivy J, Hay P. Eating Disorders. In the series: Psychological Therapies and Behavioural Medicine Evidence-based Practice, Hogrefe & Huber, 2006.

Fairburn CG.Transdiagnostic cognitive behavior therapy for eating disorders. New York: Guilford Press, 2010.

REFERENCES

[1] Fairburn CG. A cognitive behavioural approach to the treatment of bulimia. Psychol Med. 1981;11:707-711.

[2] Garner DM, Bemis KM, A cognitive-behavioral approach to anorexia nervosa. Cognit Ther Res, 1982;6:123-150.

[3] Fairburn CG, Cooper Z, Shafran R. Cognitive behavior therapy for eating disorders: A "transdiagnostic" theory and treatment. Beh Res Therapy, 2003;41:509–529.

[4] Fairburn CG. Transdiagnostic cognitive behavior therapy for eating disorders. New York: Guilford Press, 2010.

[5] National Institute for Clinical Excellence (NICE). Eating disorders: Core interventions in the treatment and management of anorexia nervosa, bulimia nervosa and related disorders. Clinical Guideline Number 9. London: NICE, 2004.

[6] Touyz S, Polivy J, Hay P. Eating Disorders. In the series: Psychological Therapies and Behavioural Medicine Evidence-based Practice, Hogrefe & Huber, 2006.

[7] Hay P. Eating disorders. In Best practices in behavioral management of disorders of infancy, childhood, and adolescence. Trafton, JA, Gordon W Eds. Los Altos, CA: The Institute for Brain Potential, 2008.

[8] Shapiro JR, Berkman ND, Brownley KA, Sedway JA, Lohr KN, Bulik CM. Bulimia nervosa treatment. A systematic review of randomised controlled trials. Int J Eat Disord, 2007;40:321-336.

[9] Hay P, Bacaltchuk J, Claudino A, Ben-Tovim D, Yong PY. Individual psychotherapy in the outpatient treatment of adults with anorexia nervosa (Cochrane Methodology Review). In: The Cochrane Library, Issue 4. Chichester, UK: John Wiley & Sons, Ltd., 2003.

[10] Agras WS, Walsh BT, Fairburn CG, Wilson GT, Kraemer HC. A Multicenter Comparison of Cognitive-Behavioral Therapy and Interpersonal Psychotherapy for Bulimia Nervosa. Arch Gen Psychiatry, 2000;57:459-466.

[11] Claudino A, Bacaltchuk J, Hay P. Pharmacotherapy for eating disorders. Chapter 10 in Interventions for Body Image and Eating Disorders; Evidence and Practice. Paxton S, Hay P Eds. IP Communications, Melbourne. 2009.

[12] Fairburn CG, Marcus MD, Wilson GT. Cognitive behavior therapy for binge eating and bulimia nervosa: A comprehensive treatment manual. In Binge Eating: Nature, Assessment, and Treatment. Fairburn CG, Wilson GT Eds. New York: The Guilford Press, 1993:361-404.

[13] Keys A, Brozek J, Henschel A, Mickelsen O, Taylor HL. The biology of human starvation (Vols. 1–2). Minneapolis, MN: University of Minnesota Press, 1950.

[14] Waller G, Mountford V, Lawson R, Gray E, Cordery H, Hinrichsen H. Beating Your Eating Disorder. A Cognitive-Behavioral Self-Help Guide for Adult Sufferers and their Carers Bambridge, Cambridge, 2010.

[15] Fairburn CG, Cooper Z, Doll HA, O'Connor ME, Bohn K, Hawker DM, Wales JA, Palmer RL Transdiagnostic cognitive-behavioral therapy for patients with eating disorders: a two-site trial with 60-week follow-up. Am J Psychiatry, 2009;166:311-319.

[16] Fairburn CG, Jones R, Peveler R, Carr SJ, Solomon RA, O'Connor, M. E, Burton J,Hope RA. Three psychological treatments for bulimia nervosa: A comparative trial. Arch Gen Psychiatry,1991;48:463–469.

[17] Garner DM, Vitousek KM, Pike KM. Cognitive-behavioral therapy for anorexia nervosa. In Handbook of Treatments for Eating Disorders. 2nd edition. Garner DM, Garfinkel, PE Eds. New York: The Guilford Press, 1997:94-144.

[18] Pike KM, Carter J, Olmsted M. Cognitive Behavioral Therapy manual for anorexia nervosa. In The Treatment of Eating Disorders A clinical handbook. Grilo C, Mitchell JE Eds. The Guilford Press, 2010:83-108.

[19] Garner PE. Psychoeducational principles in treatment. In Handbook of treatment for eating disorders (2nd ed.) Garner DM, Garfinkel PE. Eds. New York: The Guilford Press. 1997: 145-177.

[20] Birmingahm CL, Treasure J. Medical management of eating disorders. (2nd Ed.) Cambridge: Cambridge University Press, 2010.

[21] Channon S, de Silva P, Hemsley D, Perkins R. A contolled trial of cognitive-behavioural and behavioural treatment of anorexia nervosa. Beh Res Therapy, 1989;27:529-35.

[22] Serfaty MA, Turkington D, Heap M, Ledsham L, Jolley E. Cognitive therapy versus dietary counselling in the outpatient treatment of anorexia nervosa:. Eur Eat Disorders Rev, 1999;7:334-50.

[23] McIntosh VVW, Jordan J, Carter FA, Luty SE, McKenzie JM, Bulik CM, Frampton CM, Joyce PR. Three psychotherapies for anorexia nervosa: a randomized controlled trial. Am J Psychiatry, 2005;162:741-747.

[24] Pike KM, Walsh BT, Vitousek K, Wilson GT, Bauer J. Cognitive behavior therapy in the post-hospitalization treatment of anorexia nervosa. Am J Psychiatry, 2003;160:2046-2049.

[25] Cooper Z, Fairburn. A new cognitive behavioural approach to the treatment of obesity Behav ResTher, 2001;39:499-511.

[26] Cooper Z, Doll HA, Hawker DM, Byrne S, Bonner G, Elizabeth E, O'Connor ME, Fairburn CG. **A** new cognitive behavioural treatment for obesity: A randomized controlled trial with three-year follow-up. Behav ResTher, 2010;48:706-13.

[27] National Health and Medical Research Council (NHMRC). Dietary Guidelines for Australian Adults. Canberra: Commonwealth of Australia, 2003.

[28] Vidal J. Updated review on the benefits of weight loss. Int J Obes, 2002;26:S25–S28.

[29] Byrne S, Cooper Z, Fairburn C. Weight maintenance and relapse in obesity: a qualitative study. Int J Obes, 2003; 27: 955-962.

[30] Kausman R. If not dieting then what? Allen & Unwin Ltd., Melbourne, 2005.

[31] Fairburn CG, Norman PA, Welch SL, O'Connor ME, Doll HA, Peveler RC. A prospective study of outcome in bulimia nervosa and the long term effects of three psychological treatments. Arch Gen Psychiatry, 1995;52:304-12.