Intensive Cognitive Behavioural Treatment For Eating Disorders

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Abstract

Cognitive behavioural therapy (CBT) is the most effective treatment for adults with bulimia nervosa (BN), but it is not effective enough; at best, only half of patients make a full remission and it has not been designed for treating patients with anorexia nervosa (AN) and eating disorder not otherwise specified (EDNOS). To address some of these limitations, an enhanced form of CBT for BN, named CBT-E, has been developed. CBT-E adopts modern procedures to address eating disorder psychopathology, and it is suitable for treating all forms of clinical eating disorders. The treatment was originally designed for adults in standard outpatient settings, but was then adapted for intense levels of care (e.g., intensive outpatient, day-hospital, and inpatient). In this article intensive CBT-E for treating eating disorders will be described. A brief summary of the data supporting this novel form of treatment will also be provided.

Keywords

Cognitive behavioural therapy (CBT), eating disorder, anorexia nervosa (AN), bulimia nervosa (BN), eating disorder not otherwise specified (EDNOS), inpatient treatment

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Eating disorders are common health problems afflicting predominantly adolescent and young women.1 They are often associated with severe morbidity² and carry increased risk of death.³ Although some progress has been achieved in their treatment, several problems still need to be resolved. Cognitive behavioural therapy (CBT) is the most effective evidence-based treatment available for the management of adults with bulimia nervosa (BN),⁴ but its effectiveness needs to be improved since only a third to a half of patients make a complete and lasting recovery.⁵ The effectiveness of CBT in adolescents and in the 'real world' also needs to be evaluated. In anorexia nervosa (AN) there is a lack of evidence-based treatments for adults, and in eating disorder not otherwise specified (EDNOS) - the most common eating disorders treated in clinical settings^{6,7} - there is almost no research on the treatment. The only study evaluating the long-term effectiveness of CBT for AN, and sub-threshold AN, showed a 33% remission at three years after the end of the treatment.⁸ Finally, in all eating disorder categories it is necessary to evaluate the effectiveness of more intensive levels of care (e.g., day-hospital or inpatient treatment).

To address some of these problems, an enhanced form of CBT (CBT-E) has been developed.⁹ The treatment, based on the transdiagnostic cognitive behavioural theory of eating disorders,¹⁰ is derived from CBT for BN. It is described as 'enhanced' because it has been designed to be more potent, and transdiagnostic, in its scope.¹¹ CBT-E, originally designed for adults with eating disorders in conventional outpatient settings, has proved to be as effective for patients with not-underweight EDNOS as for patients with BN, with two-thirds of those who completed treatment having a good outcome.¹² Successively, it was adapted for adolescents¹³ and intense levels of care (e.g., intensive outpatient, day-hospital, and inpatient),^{14,15} to treat patients with poor response to standard

outpatient-based treatment and with features that prevent outpatient treatment from being appropriate.

In this article the transdiagnostic cognitive behavioural theory of eating disorders and an overview of CBT-E and its principal procedures will be provided. This is followed by a description of intensive CBT-E and its implementation with severe eating disorder patients, together with preliminary data on its effectiveness.

The Transdiagnostic Cognitive Behavioural Therapy for Eating Disorders

Contrary to the Diagnostic and Statistical Manual of Mental Disorders fourth edition (DSM-IV),¹⁶ which classifies eating disorders in three major categories (AN, BN and EDNOS), the transdiagnostic cognitive behavioural theory, developed by Fairburn et al.,¹⁰ proposes that it might be more useful to consider eating disorders as a single diagnostic category. Two main arguments support the transdiagnostic view.¹⁷ First, AN, BN and EDNOS share most of their distinctive clinical features. Second, patients tend to migrate among the eating disorder categories.¹⁸ This has led to the view that the DSM classification of eating disorders is of limited clinical utility, and that common transdiagnostic mechanisms may be involved in the maintenance of eating disorders.¹⁰

According to the transdiagnostic theory,¹⁹ the over-evaluation of shape, weight and their control is central in the maintenance of eating disorders. The main clinical features of eating disorders (e.g., strict dieting; non-compensatory weight-control behaviours, compensatory vomiting/laxative misuse, low weight and binge eating) derive directly or indirectly from this 'core psychopathology', and in turn maintain the over-evaluation of shape and weight through several self-perpetuating mechanisms (see *Figure 1*).

The theory also proposes that in certain people, one or more of three 'external' maintaining mechanisms interact with the eating disorder psychopathology creating an additional obstacle to change.¹⁰ The three proposed external maintaining mechanisms are clinical perfectionism, core low self-esteem and interpersonal difficulties.

An Overview of CBT-E

The availability of different intensities of care (from outpatient to inpatient) permits provision of CBT-E within a 'stepped-care' approach (see *Figure 2*)²⁰ that can be adapted depending on the resources available in the community. The most distinctive and unique characteristic of multistep CBT-E is that the same theory and procedures are applied at each level of care. The only difference in the various steps is the intensity of treatment, less intense in the outpatient CBT-E, most intense in inpatient CBT-E.²⁰

CBT-E can be administered in two main versions at all the levels of care.⁹ The 'focused' version (CBT-Ef) addresses exclusively the eating disorder psychopathology. It is suitable for the majority of patients and must be considered the default version. The 'broad' version (CBT-Eb) also addresses one or more of the three 'external' maintaining mechanisms of the eating disorder psychopathology. Preliminary data indicate that CBT-Eb should be reserved only for patients in whom clinical perfectionism, core low self-esteem, or interpersonal difficulties are marked and maintaining the eating disorder.¹²

The Principal Procedures of CBT-E

CBT-E is a treatment for the eating disorder psychopathology rather than the DSM-IV eating disorder diagnosis.¹⁰ The formulation of the psychopathology features present in the person with the eating disorder, and the processes that appear to be maintaining them, dictate the content of the treatment.⁹ CBT-E addresses the eating disorder psychopathology using a flexible series of sequenced cognitive behavioural procedures and strategies integrated with education.⁹ To modify thinking, CBT-E focuses on the use of strategic changes in behaviour rather than a direct cognitive restructuring.⁹ As in other forms of CBT, CBT-E uses a collaborative working relationship in which therapist and patient work together as a team to overcome the eating problem.⁹

CBT-E adopts two key principles.⁹ First, simpler procedures are preferred over complex ones. Second, it is better to do 'a few things well than many things badly' (the principle of parsimony). CBT-E theorists have compared the eating disorder psychopathology to a house of cards and suggested that the key strategy in the treatment is to identify and remove the key cards that are supporting the eating disorder, thereby bringing down the entire house.¹¹

A detailed description of the procedures underlying outpatient CBT-E can be found in the book *Cognitive Behavior Therapy and Eating Disorders*.⁹

Preparation for CBT-E

An assessment interview of two or more sessions is arranged before starting CBT-E. The assessment process should be collaborative and is designed to put people at ease and begin to engage them in treatment and in change. The preparation has several aims.²¹ First, to establish the nature and severity of a person's psychiatric problem. Second, to evaluate from the assessment information if CBT-E is appropriate, and if people should be treated with outpatient CBT-E or

Figure 1: The 'Transdiagnostic' Cognitive Behavioural Theory



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with more intensive forms of CBT-E. Third, if CBT-E seems appropriate, to describe the main aspects of the treatment, and to encourage people to make the most of the opportunity to overcome their eating problem.

Addressing the Low Motivation to Change

This is a crucial step in the preparation for CBT-E, and in particular with severely underweight candidates for intensive CBT-E, as they do not regard being underweight as a problem. The aim is that patients independently arrive at the conclusion that treatment is necessary and that weight regain should be their treatment goal.9 This may be achieved through several strategies. A description of the psychosocial effects of being underweight may help patients to understand that several problems they are experiencing (e.g., social isolation, irritability, mood alterations, increase in obsessions, lack of sexual desire) are the consequences of malnutrition and not characteristics of their true personality, as observed in the Minnesota Starvation Study.²² Developing a good therapeutic alliance, showing interest in patients as people and collaboratively evaluating the pros and cons of change, may help people to take the decision to start treatment and to address the process of weight regain. Finally, encouraging people to 'take the plunge'9 and to directly test the pros and cons of experiencing the effect of weight regain may help patients not to procrastinate the change.

The following paragraphs provide a description of inpatient CBT-E and intensive outpatient CBT-E, two versions of intensive CBT-E based on experience at Villa Garda Hospital.

Inpatient CBT-E

The rationale behind extending CBT-E to inpatient treatment stems from three main considerations. First, a subgroup of patients does not respond to outpatient CBT-E¹² or has an eating disorder of such clinical severity as not to be manageable in an outpatient setting. Second, data on changing the type of outpatient treatment (e.g., interpersonal psychotherapy or fluoxetine) in patients who are not responding to CBT are inconclusive.²³ In these cases the alternative to outpatient treatment is almost always hospitalisation in specialised eating disorder units. Unfortunately, most units adopt an eclectic approach not driven by a single theory and their effectiveness is not empirically supported. Third,

Figure 2: The Four Steps of CBT-E



NB. The height of the bars indicates approximately the intensity and the cost of the treatment.

the ineffectiveness of outpatient CBT-E in some patients might depend on insufficiently intense care rather than the nature of the treatment.²⁰

Indications and Goals of Inpatient CBT-E

The main indications for inpatient CBT-E are¹⁴ poor response to well-delivered outpatient-based treatment, presence of features that make outpatient treatment inappropriate, including very low BMI (<15.0), a rapid weight loss (>1kg per week) for several weeks and severe medical complications. Other indications include high frequency of binge eating and vomiting or excessive exercising and severe interpersonal problems. Contraindications are daily substance misuse and acute psychotic states.

Admission to inpatient CBT-E is voluntary and, as in other forms of CBT, it is fundamental that patients give priority to the treatment and play an active role during the entire process of care. For these reasons, preparation of the treatment is fundamental.

The main goal of inpatient CBT-E is to help patients to reach a condition in which they can benefit from outpatient CBT-E. $^{\rm 14}$

The Unit

The unit is 'open', and the atmosphere is psychological rather than medical, and not institutional. Patients in a stable medical condition are free to go outside the unit. Similarly, family and friends are free to visit, outside periods dedicated to therapeutic sessions. An open unit has the advantage of exposing people to a wide range of environmental triggers associated with the maintenance of their eating disorder, which is a fundamental strategy aimed at reducing the relapse rate after discharge; a problem often observed in traditional, closed units.

General Organisation and Treatment Procedures

Inpatient CBT-E lasts 13 weeks and it is followed by seven weeks of day-hospital treatment. The treatment is divided into four stages, each with specific aims (see *Table 1*). The treatment is highly personalised, being based on the personal formulation, including the processes appearing to maintain people's eating disorder psychopathology (*see Figure 1*).

The treatment adopts the main procedures of outpatient CBT-E,²⁴ but some are adapted while others are specifically designed for inpatient CBT-E (see *Figure 3*).¹⁴

Table 1: The Main Focuses of the Four Inpatient CBT-E Stages

Sta	ge one (weeks one to four)
0.00	Engaging the patient in treatment and change
	Educating the patient
	Jointly creating the formulation
	Establishing real-time self-monitoring
	Establishing collaborative weekly weighing
	Addressing under-eating and underweight
	Involving family and friends
Sta	ge two (weeks five to six)
	Continuing with the procedures introduced in stage one
	Joint reviewing of progress
	Identifying problems still to be addressed and any emerging barriers to
	change
	Revising the formulation if necessary and designing stage three
Sta	ge three (weeks seven to 17)
	Addressing the over-evaluation of shape and weight
	Addressing residual dietary rules
	Addressing event-related changes in eating
	Addressing clinical perfectionism, low self-esteem and interpersonal
	problems (CBT-Eb), if one or more of these external maintaining
	mechanisms have emerged as barriers to change in stage two
Sta	ge four (weeks 18 to 20)
	Maintaining the progress made so far
	Preparing for subsequent outpatient-based CBT-E

The Use of Multiple Therapists

A multidisciplinary but 'not eclectic' team, comprising physicians, dieticians, psychologists and nurses, delivers the treatment. All team members are fully trained in CBT-E, use the same concepts and terms and adopt CBT-E procedures and strategies. The person's personal formulation integrates each staff member's contribution to treatment.

Monitoring of Weight and Eating Habits

Patients measure their body weight with the assistance of the nurse in the first eight weeks and thereafter by themselves. Patients also fill in a once-weekly checklist, which reports the frequency of key eating disorder behaviours and attitudes in the last seven days.

Weight Goals and Guidelines for Regaining and Maintaining Weight

At admission, underweight people are educated about the rationale of weight regain and actively involved in deciding their BMI goal range (which is generally between a BMI of 19.0 and 20.0). They are also trained to plan, in advance, the energy content of their dietary plan so as to achieve a weight regain of one to 1.5kg per week. In the first week of treatment, their energy intake is set at 1,500 kcal per day; it is then increased to 2,000 kcal per day in the second week, and to 2,500 kcal per day in the third week. Subsequently, a person's energy intake is adjusted on the basis of their rate of weight regain. Once a person's weight achieves a BMI of 18.5 their energy intake is gradually reduced in order to reach and maintain their body weight within the goal BMI range. Patients who are not underweight are informed that, in general, there is no change in body weight with the treatment, and that the main goal is to achieve control over eating and, as a consequence, control of weight. They are also educated that a reasonable weight maintenance range of 3kg will be identified only after four to six weeks, when eating behaviour has stabilised.

Settings	Inpatient								Day-hospital											
Stages	One			Two		Three										Four				
Weeks	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
	CBT-E individual sessions (twice a week in stage one, then once a week)																			
	Weekly review meeting with all the named therapists (dietician, medical doctor, psychologist, nurse)																			
CBT-Ef	Weekly monitoring of weight and eating habits																			
CB1-EI	Assisted eating (four times a day)							Non-assisted eating												
	Group sessions (one CBT-E session a week; three psychoeducational sessions a week)																			
	Physical exercise sessions (two sessions a week)																			
CBT-Eb				Clinical perfectionism module																
					Core low self-esteem module															
One or more modules if external maintenance				Interpersonal difficulties module																
factors are detected in stage two			CBT family therapy module (if age <18 years)																	

Figure 3: General Organisation of Inpatient CBT-E

Weekly Review Meeting

Once a week the patient and his or her therapists (i.e. physician, psychologist, dietician and nurse) meet together to discuss the various elements of the treatment. The review meeting starts by analysing the person's interpretation of the weight graph. Then the patient is encouraged to suggest changes to be made to his or her diet based on the weight regain or weight maintenance goal received at admission. The state of personal formulation is also discussed with people.

Assisted Eating

Assisted eating typically takes place over the first six weeks or until a patient reaches a BMI greater or equal to 18.5. In this phase patients eat three meals and a snack each day (breakfast, lunch, mid-afternoon snack and dinner) with the assistance of a CBT-E trained dietician who uses cognitive behavioural procedures to help them eat. Patients are encouraged to view food as a 'medication', and to eat 'mechanically' (i.e., without being influenced by thoughts, emotions, hunger and fullness) for the time being. This type of eating is continued until patients can eat autonomously and appropriately. The main therapeutic techniques used are education and support, distraction and, in those who are not too preoccupied, de-centring from problematic thoughts and urges. In some patients, ritualistic eating habits are also addressed. During the phase of assisted eating, patients stay in a dedicated room for one hour after eating and do not have access to a bathroom.

Addressing Dietary Restraint

Once the assisted eating is concluded, patients are encouraged to eat without assistance and to start eating outside the unit. Patients plan their eating in advance and record it much the same way as in outpatient CBT-E. They are no longer supervised after eating and have free access to a bathroom. Dietary restraint and dietary rules are approached using the strategies and procedures of outpatient CBT-E. During the final weeks of treatment, patients spend progressively more days at home and gradually consume all meals outside the unit following elastic dietary guidelines.

CBT-E Individual Sessions

They are held twice a week for the first four weeks, then once a week. The focus is on engaging patients in the treatment, helping them to accept the rapid changes in weight and shape, addressing events and emotions influencing eating and the over-evaluation of shape and weight. In some patients, one or more external maintaining mechanisms are also addressed.

Group Treatment Sessions

Group treatment sessions are used to supplement the individual ones. Two types of group are held, psychoeducational and CBT-E focused. The psychoeducational groups are held three times a week and interactively provide information about eating disorders and CBT strategies for addressing eating disorders. The CBT-E groups are weekly and focus on three main topics: addressing events and associated mood influencing eating, addressing dietary restraint and addressing the over-evaluation of shape and weight.

Physical Exercise Sessions

Patients participate in physical exercise sessions twice a week to improve the restoration of muscle mass, to facilitate the acceptance of changes in their shape and to learn to exercise without thinking about shape, weight and calorie consumption.

Involvement of Family and Friends

With adult patients, family and friends are seen, if the patient is willing and doing so is likely to facilitate treatment. People under the age of 18 years, and their family and friends, participate in a 'family module' consisting of eight family sessions, and two family meals in the unit.

Maintaining Change After Discharge

To achieve this goal, the following strategies have been included in the treatment: $\ensuremath{^{14}}$

- the unit is open and patients are exposed to several environmental triggers during the treatment;
- there is a day treatment phase near the end of the admission during which patients face some of the difficulties that they will encounter after discharge while still having the support of treatment;
- family and friends are involved in treatment and are helped to create a positive environment for the patient to return home; and
- towards the end of treatment considerable effort is put into arranging suitable post-discharge outpatient treatment.

Intensive Outpatient CBT-E

Intensive outpatient-based CBT-E has been designed primarily to help people who are having difficulty modifying their eating behaviours with conventional outpatient CBT-E. Intensive outpatient CBT-E is indicated for people who are, typically, underweight and are unable to eat more and regain weight with conventional outpatient CBT-E. The treatment may also be indicated for not-underweight people with frequent binge eating and vomiting if they are unable to modify their eating habits with conventional outpatient CBT-E.

Figure 4: General Organisation of Intensive Outpatient CBT-E

	Monday	Tuesday	Wednesday	Thursday	Friday
12:45pm – 1:00pm	Body weight		Body weight		
	measurement		measurement		
1:00pm – 2:00pm	Assisted lunch	Assisted lunch	Assisted lunch	Assisted lunch	Assisted lunch
2:00pm – 3:00pm	Round table	Psychoeducational	Free time for studying	Free time for studying	Psycho-educational
		group	or doing other activities	or doing other activities	group
3:00pm – 4:00pm	Individual session	Individual session	Medical examination ¹	Individual session	Individual session
	with dietician	with psychologist		with psychologist	with dietician
	(weekend revision				(weekend preparation)
	and meal planning)				
4:30pm – 5:00pm	Assisted snack	Assisted snack	Assisted snack	Assisted snack	Assisted snack
5:00pm – 6:30pm	Free time for studying	Free time for studying	Free time for studying	Free time for studying	Free time for studying
	or doing other activities	or doing other activities	or doing other activities	or doing other activities	or doing other activities
6:30pm – 7:30pm	Assisted dinner	Assisted dinner	Assisted dinner	Assisted dinner	Assisted dinner
7:30pm – 7:45pm	Food provision for	Food provision for	Food provision for	Food provision for	Food provision for the
	breakfast	breakfast	breakfast	breakfast	weekend

¹Weekly in severely underweight patients (BMI <16 kg/m²) and/or with medical complications (e.g. low serum potassium levels), every two or three weeks in those treated with antidepressants.

The main goal of intensive outpatient CBT-E is to help people reach the stage at which they can benefit from conventional outpatient CBT-E.

The Intensive Outpatient Unit

Intensive CBT-E should be provided in a specialised outpatient centre for eating disorders. The atmosphere at the centre should be psychological and not medical and requires standard treatment offices, a kitchen (with microwaves, refrigerator with a large freezer, sink, and dishwasher), a dining room where assisted eating can take place, a recreational room and facilities to enable patients to study.

The Intensive Outpatient CBT-E Team

Intensive outpatient CBT-E is conducted by a multidisciplinary team trained in CBT-E. The team comprises physicians, psychologists and dieticians. Like inpatient CBT-E, there is a weekly review meeting in which all the therapists meet with the patient to review the various elements of the treatment.

General Organisation and Treatment Procedures

The treatment has a fixed duration of 12 weeks for underweight people. With not-underweight people, but with highly disturbed eating habits, the treatment may be much shorter (two to four weeks). People attend from 12.45am to 7.45pm every weekday. In the last four weeks patients eat progressively more meals outside the outpatient unit and the treatment gradually evolves into conventional outpatient CBT-E.

The treatment adopts the main procedures of outpatient CBT-E,²⁴ but some are adapted while others are specifically designed for intensive outpatient CBT-E (see *Figure 4*).¹⁴

Monitoring of Weight and Eating Habits

Body weight is measured by the dietician for the first eight weeks of treatment on Mondays and Fridays, and thereafter by the patients themselves. Patients fill the same weekly checklist of inpatient CBT-E, and these data, together with those on body weight change, are examined at the weekly review meeting.

CBT-E Sessions

The individual sessions with a psychologist are similar to those of conventional outpatient CBT-E, but the major focus is on helping

patients to accept the rapid changes in eating, weight and shape. The sessions with the dietician – not provided by conventional outpatient CBT-E – address patient's eating habits and their nutritional needs. They also address the obstacles in maintaining the changes in eating that occur in the unit during weekends.

Assisted Eating

Patients eat three meals a day (lunch, snack and dinner) in the outpatient unit. The food is frozen or pre-packaged so that it requires minimal preparation. During the first four weeks, the dietician carries out meal planning. From week five, patients plan meals by themselves. All foods are given to the patients by the dietician 10 minutes before mealtimes and are defrosted by the patients. At 7pm, the dietician gives the patients food for breakfast and on Friday evenings pre-packaged and frozen foods for the weekend. In the last four weeks there is a gradual reduction in the consumption of prepared meals and patients begin to eat outside the unit. The procedures of assisted eating and the target rate of weight regain are the same as those used in inpatient CBT-E.

Involvement of Friends and Family

The same protocol is adopted as that used in inpatient CBT-E.

Maintenance of Change After Discharge

Relapse after inpatient treatment is due in part to the fact that the changes take place while patients are in the protected inpatient environment and in part because there is a major disruption of the treatment after discharge. None of these problems affects intensive outpatient CBT-E; here changes occur while the patient is living at home, and the individual CBT-E sessions continue with the same therapist after the end of the intensive phase of the treatment. To minimise the risk of relapse, however, patients are encouraged to become progressively more responsible for their meals during the course of treatment.

Data on Intensive CBT-E Effectiveness

Preliminary data on a randomised control study on the effectiveness of inpatient CBT-E in 80 underweight people showed that in those who completed (90%) the BMI increased from 14.4 \pm 1.7 at admission to 18.1 \pm 1.9 at 12 months of follow-up, and this was associated with a significant improvement in the eating disorder and general

Merged paras psychopathology; although a subgroup of patients (almost 20%) relapsed after discharge.²⁵ Intensive outpatient CBT-E was applied to 20 consecutive underweight people with eating disorders who failed to regain weight with conventional outpatient CBT-E. Thirteen patients (65%) concluded the treatment. Five patients (25%) were admitted at an eating disorder inpatient unit and two (10%) prematurely interrupted treatment. Those who completed obtained significant BMI regain (from 14.6 ± 1.5 to 18.2 ± 1.0) and had significant improvement in their eating disorder and general psychopathology. At follow-up after six months, 11 (91.7%) people completed with a BMI greater than 17.5.¹⁵

transdiagnostic theory and treatment, the adoption of an individualised approach focused on patients' psychopathology rather than on DSM diagnosis, and the applicability of CBT-E to intensive care contexts.

The inpatient CBT-E described in this article represents the first attempt – in a real world inpatient setting – to apply the strategies and procedures of CBT-E. The emerging data on treatment outcomes are very positive and the changes appear to be well maintained by a large subgroup of patients. Intensive outpatient CBT-E is a novel approach requiring further evaluation. It has been designed to be an alternative to inpatient or day-patient treatment, for people who are not improving with conventional outpatient CBT-E. Very preliminary data are encouraging and suggest that the treatment seems to fulfil this role. n

Conclusions

CBT for eating disorders has made considerable advances in the last 10 years. Major steps forward have probably been the development of a

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