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Inpatient Cognitive Behavior Therapy for Severe Eating Disorders

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Abstract

Enhanced cognitive behaviour therapy (CBT-E) for eating disorders has been developed and evaluated only in outpatient setting. Aim of the paper is to describe a novel model of inpatient treatment, termed inpatient CBT-E, indicated for patients with an eating disorder of clinical severity not manageable in an outpatient setting or that failed outpatient treatment. Inpatient CBT-E is derived by the outpatients CBT-E with some adaptations to rend the treatments suitable for an inpatient setting. The principal adaptations include: 1) multidisciplinary and non-eclectic team composed of physicians, psychologists, dieticians and nurses all trained in CBT; 2) assisted eating; 3) group sessions; and a CBT family module for patients younger than 18 years. The treatment lasts 20 weeks (13 for inpatients followed by seven weeks of residential day treatment) and, as CBT-E, is divided in four stages and can be administered in a focused form (CBT-F) or in a broad form (CBT-B). A randomized control trial is evaluating the effectiveness of the treatment.

Keywords: eating disorders, cognitive behavioural treatment, anorexia nervosa, bulimia nervosa, eating disorder not otherwise specified, inpatient treatment, psychotherapy

The ideal setting of the treatment of eating disorders is outpatient treatment. It is less disruptive than inpatient or day patient treatment, and the changes made are more likely to last as patients make them while living in their usual environment (Dalle Grave, Bohn, Hawker, & Fairburn, 2008). However, a subgroup of patients does not respond to outpatient treatments or cannot be managed safely on an outpatient basis. In these cases it could be indicated a more intensive form of care, such as the inpatient treatment.

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Traditionally, inpatient treatment has been provided by a multidisciplinary team of health professionals encompassing psychiatrists, physicians, psychologists, dieticians and nurses (Dalle Grave, 2005). Unfortunately, most of the multidisciplinary teams adopted an "eclectic" approach with a variety of procedures including medical, psychological, nursing, and social intervention (Vandereycken, 2003) often stemming from different and sometimes conflicting theories The multidisciplinary and eclectic approach has many problems not yet resolved. Firstly, it doesn't allow the evaluation and the dissemination of the intervention, since it almost impossible to replicate it. Secondly, it is based on the clinical judgment of the therapists that often select competing and incompatible techniques. Thirdly, it increases the risk of splitting between the team members which can be used by patients to increase resistance to the treatment. Fourthly, it is associated with a high rate of relapse after the discharge (Pike, Walsh, Vitousek, Wilson, & Bauer, 2003; Vandereycken, 2003).

The inpatient CBT-E is an innovative form of treatment recently developed in the Department of Eating and Weight Disorder of Villa Garda Hospital (Italy) to overcome the main problems of the traditional multidisciplinary eclectic inpatient treatment (Dalle Grave, et al., 2008). The new treatment stems from the transdiagnostic cognitive behavior theory of eating disorders (Fairburn, Cooper, & Shafran, 2003), uses coherent and consistent manual-based approach and the main procedures adopted by standard CBT-E, but it has been adapted to make it suitable for an inpatient setting.

Aim of this paper is to describe the theoretical basis and the general procedures and strategies of inpatient CBT-E.

The Transdiagnostic Cognitive Behavioral Theory of Eating Disorders

Inpatient CBT-E stems from the transdiagnostic cognitive behavior theory of eating disorders (Fairburn, Cooper, & Shafran, 2003). The theory has been developed to explain the processes which maintain eating disorders (Fairburn, Cooper, & Shafran, 2003). According to the theory, the over-evaluation of shape and weight and their control, also defined as the "core psychopathology", is central in the maintenance of all clinical eating disorders (anorexia nervosa, bulimia nervosa, and eating disorders not otherwise specified). The principal clinical features of eating disorders stem directly (e.g., extreme weight control behaviors, purging behaviors, driven exercising, dietary restriction and dietary restraint, body checking and avoidance, feeling fat) or indirectly (e.g., binge eating) by the core psychopathology. These clinical features, in turn, maintain and intensify several mechanisms (see Fairburn, Cooper, & Shafran, 2003 for details), the over-evaluation of shape and weight. In addition, the theory proposes that in certain patients one or more additional external maintaining mechanisms interact with the core eating disorder psychopathology creating an additional obstacle to change.

The proposed external maintaining mechanisms are: clinical perfectionism, core low self-esteem, and interpersonal problems.

Treatment Procedures and Strategies

Inpatient CBT-E is a treatment for eating disorder psychopathology, rather than eating disorder diagnosis. The particular psychopathology features present in the patient and the processes that appear to be maintaining them dictate the content of the treatment (Dalle Grave, et al., 2008). The treatment addresses the eating disorder psychopathology using cognitive behavior procedures and strategies. Inpatient CBT-E adopts a style resembling that of other forms of CBT. It uses a collaborative working relationship in which therapist and the patient work together as a team to overcome the eating disorder. Patients with eating disorders particularly appreciate this approach because they like to feel in control. Underweight patients, for example, are informed in detail to understand what is happening and are encouraged to be active participants during the process of weight regain and weight maintenance. It is our experience, if these patients feel controlled, coerced to change or misled, it tends to increase their resistance. We always underline to patients that the change will be hard and difficult, but worthwhile, and that it is fundamental for overcoming the eating problem to give the priority to the treatment. Ongoing self-monitoring and the accomplishment of strategically planned homework are of fundamental importance to achieve the change, and therefore we try to be both empathic and firm in encouraging patients to accomplish these tasks, especially when they are difficult and anxiety-provoking.

Inpatient CBT-E adopts two key principles. First, simpler procedures are preferred over complex one. Second, it is better to make few things well rather many things badly (the principle of parsimony) (Fairburn, Cooper, & Shafran, 2008). However, we always look for the best effective strategy or procedure for the single patient. Inpatient CBT-E is a primarily concerned with the processes that are maintaining the patients' eating disorder psychopathology, with cognitive processes being viewed of central importance (Fairburn, 2008). It uses cognitive and behavioral strategies integrated with education. The key strategy of CBT-E is to create a "formulation" (or a set of hypothesis) of the maintaining mechanisms of the patients' psychopathology. The formulation is used to identify the features to address in the treatment. An initial personal formulation is built collaboratively with patients at the start of the treatment, but then is revised during the course of the treatment. The aim is to create a bespoke tailor-made treatment that fits the individual patient's (Fairburn, Cooper, & Shafran, 2008). Inpatient CBT-E uses generic cognitive and behavioral strategies to address cognitive bias (e.g., selective attention, or dichotomous thinking), but differs from traditional CBT for the following reasons (Fairburn, Cooper, & Shafran, 2008):

- *It does not use the thoughts record*. Patients are encouraged to use the last column of the monitor record to record thoughts and feelings associated with a particular topic (e.g., when addressing body checking or feeling fat) or when they have some typical eating disorder behaviors (e.g., dietary restraint, driven exercising, self-induced vomiting, weight and shape checking). This strategy helps patients to monitor the state of their formulation in real time, and to connect their thoughts and feeling with their eating and other behaviors.
- *It does not use formally cognitive restructuring*. We think that in eating disorder patients the most powerful way to obtain a cognitive change is to encourage them to change some behavior associated with the eating disorder psychopathology and observing the effect and the implication of those changes.
- *It does not use some classical cognitive concepts.* We think that concepts like schemas, core beliefs, assumptions, and automatic thoughts are not useful to obtain a change in eating disorder patients.
- *It does not use systematically Socratic questioning.* We adopt a collaborative empiricism, and exploratory questioning to help patients to clarify their thinking, but we do not think that the so-called "Socratic questioning" as essential, although can be useful some time. With these particular patients we can usually achieve the same end with simpler and more efficient means.
- *It makes scarce use of formal behavior experiments*. Again with these particular patients we found that formal behavior experiments are difficult to interpret. In part because the change of core psychopathology (e.g., the over-evaluation of shape and weight) is not rapidly modified with short-term behavior experiments. However, we help patients to plan and make strategic behavior changes in the contest of their personal formulation to produce cognitive changes.
- *It does not ask patients to record the sessions*. In our experience the listening to treatment sessions may trigger in this particular patients ruminative thinking.

What we think is essential is that patient learning gradually to de-center from their eating disorder. Patients are encouraged to become experts in how the eating disorder works and why is self-maintaining. They are encouraged to observe themselves enacting their formulation live (in real time), and to become interested by the effects of trying to change the behavior. In the later phase of the treatment, when the main maintenance processes are disrupted, patients are encouraged to shift from their mind-set when it becomes activated.

Indications and Contraindications

We recommend inpatient CBT-E for patients whose eating disorder has not improved with well-delivered outpatient treatments and with high or moderate physical risk. Typical conditions include a very low body mass index (BMI) (less than 15.0 kg/m^2), a rapid weight loss (major than 1kg per week) for several weeks, marked medical complications (e.g., pronounced oedema, severe electrolyte disturbances, E.C.G. alterations, and hypoglycaemia). Other indications include severe high frequency and intensity of binge eating and vomiting or driven exercising, severe interpersonal problems, and abusive family (Dalle Grave, et al., 2008). It is fundamental that patients are available to give the priority to the treatment and to play an active role during all the process of care. In others words, we admit patients engaged and available to change but that were unable to improve with outpatient treatment.

The treatment, as all the CBT-E treatments, is contraindicated for patients with daily substance misuse (intermittent substance misuse is not a contraindication), acute psychosis state, high suicide risk, and medical conditions requiring acute and urgent treatment. After the resolution of these acute states all these patients can be admitted at inpatient CBT-E (Dalle Grave, et al., 2008).

Goals

The main goal of inpatient CBT-E is to get patients to a state such that they can benefit from outpatient treatment. The treatment is mainly focused to help patients to change their relationship to their eating disorder (developing "metacognitive awareness"; Teasdale, et al., 2002). This involves a shift in cognitive set a "de-centering" from the eating disorder. Thorough the course of all the treatment patients are helped in becoming interested in why they continue to do what they do and in ceasing to identify with the eating disorder. Rather than "being anorexic", patients are encouraged to think that they have "anorexia nervosa", a disorder that is associated with a characteristic mindset. The goal is to help patients to develop, sustain and utilize this de-centered perspective to overcome the eating disorder.

Distinctive Characteristics

The inpatient CBT-E has some distinctive characteristics that distinguish it from the traditional inpatient treatment for eating disorders:

1. The treatment is an adaptation of outpatient CBT-E. It uses the same procedures and strategies but it is more intensive. Outpatient CBT-E is one of the leading evidence-based treatments for adults with an eating problem (Wilson & Shafran, 2005).

2. The treatment has been designed to be suitable for all forms of clinical eating disorder so long as inpatient management is appropriate. The specific eating disorder diagnosis is not of relevance to the treatment. Rather, the content is dictated by the particular problems present and the processes that appear to be maintaining them.
3. The treatment can be considered as a form of intensive psychotherapy. It is not an institutional and medical treatment. The entire inpatient treatment experience is CBT-E 24 hours a day, seven days a week. In other words it is psychotherapy "immersion" to overcome the patient's eating disorder.
4. The treatment is a one-to-one talking-type, but some element is delivered in group format. It primarily focuses on what is keeping the eating disorder going. It is therefore mainly concerned with the present and future. It addresses the origins of patient's problem as needed.
5. The treatment has two main versions. The "focused" version (CBT-F) addresses exclusively the eating disorder specific psychopathology. The "broad" version addresses also one or more "external" psychological problems that contribute to the maintenance of eating disorder in a subgroup of patients. The broad version (CBT-B) has three treatment "modules" addressing clinical perfectionism, core low self-esteem, and interpersonal problems, respectively.
6. The treatment is concerned with the entire functioning of the patients (psychological, physical, and social), not just their eating and weight, and it is designed to enhance their control over your eating and life.

The Unit

The treatment is provided in a specialized unit for the treatment of eating problems that treats 28 patients (16 inpatients and 12 day-patients). The unit atmosphere is not medical and it is furnished with typical home furniture. The rooms are double or triple and are equipped with private bathroom, wardrobe and desks. Patients are allowed, as in a college, to decorate their rooms with posters, personal items and photos. In the unit there is a dining room, a recreation room, where there is also a kitchen for the cooking group, an internet point room, a living room with digital TV, DVD and a bookcase. During the day patients have access to other area of the department, such as the gym, and rooms for the individual and group therapy.

The unit is "open", and patients will be free to go outside from it, if their medical conditions are stable. Similarly patients' significant are free to visit patients at any time other than mealtimes and when treatment sessions are occurring. Key elements of the treatment are the development of a trusting and collaborative relationship between patients and therapists and active role of patients in addressing their eating problem. An open unit has main the advantage to help patients to

expose them to some important environment triggers of their eating disorder during the inpatient treatment: a strategy that seems to reduce the relapse rate after discharge and to prevent the development of dependence on treatment, two problems often observed in the traditional close unit.

The Team

The treatment is delivered by a multidisciplinary team fully trained in CB-E implements the treatment. Patients are assigned to four main therapists: dietitian, psychologist, physician, and nurses, each of them has a specific role in the treatment.

The dietician is primarily focused on helping patients to change eating habits and weight. The psychologist focuses more on addressing their over-evaluation of shape and weight and their control. The physician is responsible for patients' physical health. The nurse has the usual tasks of overseeing administer medications and assist them in weighing. Therapists are by other therapists in case they are absent from the unit for a period greater than one week or more. In the unit operate also other professionals such as educators that help young patients to address school homework and physiotherapists that run the sessions of physical activity.

Patients' Attitudes and Commitment

We educate patients to consider inpatient CBT-E as an opportunity to make a "fresh start" and to build a "new life" no longer conditioned by the eating disorder. We underline that like any change there are risks, but the benefits that they may achieve are enormous and include: to think more freely without being continuously oppressed by thoughts about eating, shape and weight; to develop a mind with a broader perspective; to become happier, less irritated and rigid; to make a families, and to improve the physical health. We also encourage patients to consider the treatment as an "experiment" to test their belief about the impact of weight regain over their lives. If they will be dissatisfied with the outcome of the experiment they may return back to the eating and weight imposed by their eating problem.

We inform patients that it is crucial that every appointment (individual sessions, groups, assisted meals, review meeting) start and end on time, and that it is a good idea to arrive a little time in advance - say 10 to 15 minutes beforehand. This will give to patients an opportunity to settle down and think over things. We stimulate patients to collaborate with us to work together as a team to overcome their eating problem. Both must agree upon specific tasks (or "next steps") that patients should undertake between each session. These tasks are very important and will need to be given priority. It is what patients do between sessions that will govern to a large extent how much patients benefit from treatment. We also explain patients that since they have had the eating disorder for quite a while it is really

important that they make the most of this opportunity to change, otherwise the problem is likely to persist. Treatment will be hard work but it will be worth it. The more patients put in, the more they will get out.

Finally, we underline that the behavior of the patient may have an influence positive or negative on other patients. It is therefore important that every patient takes the responsibility to adopt a behavior not influencing negatively other patients. Constructive critics to the program are welcomed, but they should make directly to therapists and not to other patients. It is also not allowed to introduce psychoactive substances in the unit or speaking with other patients about unhealthy behavior of weight loss.

Stages and General Organization

The treatment lasts 20 weeks, 13 weeks of which are spent in inpatient followed by seven weeks of day-hospital. In the day-hospital stage patients sleep in their home or, if they live to far from the hospital, in an apartment close to the unit.

The treatment is divided in the following four stages:

- *Stage One (weeks 1 to 4)* - The focus of this stage is to engage and to educate patients on their eating disorder, and to build the personalized formulation of the main mechanism that maintains the eating disorder. In this stage patients are encourage to obtain a maximum behavior change, including if they underweight the initiation of weight regain.
- *Stage Two (weeks 5 and 6)* - In this stage patients make a detailed review of their progress and of barriers to change. In addition, with the psychologist assess if other psychological problems (e.g., clinical perfectionism, core low self-esteem and interpersonal problems) might contribute to maintain the patients' eating disorder.
- *Stage Three (weeks 7 to 17)* - The precise content of this stage is dictated by the patient's problem and the treatment become very individualized. All patients address the over-evaluation of shape and weight together with food avoidance and other dietary rules. In this stage patients might also address one or more of adjunctive psychological problems in specific modules "broad" CBT-E modules. During this stage underweight patients usually reach their target BMI range and start to practice weight maintenance.
- *Stage Four (week 18 to 20)* - The focus of this final stage in treatment is on helping patients to prepare the transition to outpatient therapy.

The treatment includes also a CBT oriented family module (see below) if patients under 18 years. Figure 1 shows the general organization of inpatient CBT-E.

Figure 1. The general organization of inpatient CBT-E

Treatment version	**Place**				
	Inpatient			Day treatment	
	Stage				
	One	Two	Three A	Three B	Four
	1^{st}-4^{th} weeks	5^{th} -6^{th} weeks	7^{th}-12^{th} weeks	13^{th}-17^{th} weeks	18^{th}-20^{th} weeks
CBT-F	CBT-E individual sessions (twice a week in the first four weeks and then once a week)				
	Weekly review meeting (patient, dietician, psychologist, physician, nurse)				
	Assisted eating		Not assisted eating (if BMI $\geq$ 18.5)		
	Group treatment sessions (four times a week)				
	Physical exercise sessions				
CBT-B (if additional "external" maintaining mechanisms emerged)			Clinical perfections module		
			Core low self-esteem module		
			Interpersonal problem module		
	CBT oriented family module *(if < 18 years)*				
Formulation	Initial		Broad		Residual

The Admission

On arrival in hospital patients are welcomed by the nurse who assign them the room and describes the general rules of the unit. Then the dietician illustrates them the organization of the program, the strategies to adopt during assisted meals and book the date of the first appointments with the psychologist (usually the day after the admission). The dietician explains and gives patients the weight regain guidelines, if they are underweight, or the weight maintenance guidelines, if they are not underweight. Patients are educated to use these guidelines to decide the change of their diet during the review meeting (see below). On the same day patient meet the physician to assess their health condition.

The Assessment

The assessment has the aim to evaluate accurately the physical and psychosocial status and it includes (see Table 1):

- *Physical examination*
- *Body weight and dietary history*

- *Laboratory tests and instrumental examinations*
- *Eating disorder psychopathology evaluation.* At admission and in the last week of the treatment a psychologist interviews patients using the Eating Disorder Examination (Cooper & Fairburn, 1987). Patients have also to fill in at admission, after four weeks and at the end of the treatment the Eating Examination Questionnaire (Fairburn & Beglin, 2008), a measure of the eating disorder features, in the last 28 days, and the Clinical Impairment Assessment (Bohn, et al., 2008), a measure of the influence of eating problem on psychological functioning, in the last 28 days.
- *General psychiatric evaluation.* The evaluation is made by a psychiatric and has the aim to assess the presence of psychiatric comorbidity (e.g., clinical depression) that might obstacle the inpatient CBT-E.

Table 1. The admission inpatient CBT-E assessment

Physical exams
Standard physical exams
Body weight and height measurement
Plicometry
Laboratory exams
Serum electrolytes
Fasting glucose
Creatinine, blood urea nitrogen (BUN)
Complete blood count (CBC)
Liver enzymes
Thyrotropin
Serum amylase in patients with self-induced vomiting
Instrumental exams
Electrocardiogram
Echocardiogram for severe underweight patients
Dual-energy x-ray absorptiometry of bone for patients who have been underweight for longer than six months
Magnetic resonance imaging or computed tomography of the brain and neuropsychological assessment for patients with atypical features, such as hallucinations, delusions, delirium, and severe cognitive impairment
Eating disorder diagnosis and psychopathology
Eating Disorder Examination
Eating Disorder Examination Questionnaire
Clinical Impairment Assessment
Psychiatric comorbidity and general psychopathology
Structured Clinical Interview for DSM-IV (SCID-I)
Brief Symptom Inventory (BSI)

Core Procedures

Inpatient CBT-E has the following core procedures that are addressed by all patients:

1. Personal formulation
2. Monitoring of weight, eating habits, and exercising
3. Weekly review meeting
4. Assisted eating
5. Not assisted eating
6. Individual sessions with psychologist
7. Group treatment sessions
8. Involvement of significant others

Personal Formulation

Therapist builds in collaboration with the patient in the individual CBT-E sessions the personal formulation of his or her eating disorder. The formulation (or a set of hypothesis) is personalized, and it includes the key maintaining mechanisms of patients' eating disorder. The formulation is used by the patient and by all team members to identify features to address in the treatment. An initial personal formulation is built in the first week of the treatment, but then it is revised during the course of the treatment. The aim is to create a bespoke tailor-made treatment that fits the patient's problem.

Monitoring of Weight, Eating Habits, and Exercising

Patients measure their body weight once a week in a private scale of the unit with the assistance of the nurse during the period of assistant eating (see below). Patients have to put the number of their weight in the weight graph and in the last column of their monitor record with their interpretation of the weight change. After the check of the weight they have to fill the Eating Problem Questionnaire (EPQ), a check-list that assess the frequency of binge eating, weight control behaviors (e.g., dietary restraint, self-induced vomiting, misuse of laxatives and diuretics, driven exercising), body checking and avoidance, feeling fat, and concerns about shape, weight and eating control, in the last seven days. The data of the weight and of the EPQ are inserted by the nurse into a database and discussed the same morning at the review meeting (see below).

During the not assisted eating initially patients measure their weight once a week in the unit without the assistance of the nurse, and in the last four week of day treatment in the scale where they live.

Weekly Review Meeting

Once a week, the same morning of the weighing, all the therapists (i.e., a physician, psychologist, dietician and nurse) meet the patient around a round table to discuss the various elements of the treatment and their relationship to one another. The review meeting starts analyzing the patient's interpretation of the weight graph. Then the patient is encouraged to suggest the changes of his or her diet following the indications of the weight regain or weight maintenance guidelines. Finally, it is addressed the state of the patient's personal formulation, analyzing also the EPQ scores, and the maintaining mechanisms to focus in the next week.

Assisted Eating

The main reason why patients are admitted to the inpatient CBT-E is that they are unable to address weight regain or interrupt binge eating and vomiting. This may depend by various reasons including the intensity of preoccupation with thoughts about food and eating, the fear of losing control over eating and weight, the presence of extreme rituals affecting eating, and the ambivalence about change. Assisted eating has been designed to help patients to overcome these problems.

Assisted eating typically takes place over the first six weeks or until patients will reach a BMI of 18.5 kg/m^2. In this stage of the treatment patients consume four meals a day (breakfast, lunch, snack, and dinner) in the dining room with other patients and with the assistance of a dietician trained in CBT-E who uses cognitive behavior procedures to help patients to eat. Patients are encouraged to view food like a "medication", and to eat mechanically for the meantime, without being influenced by thoughts on eating, emotions, and physical sensations. This type of eating will be continued until patients can eat autonomously and appropriately. In some case the dietician helps patients to address some eating rituals (e.g., eating too slow, or cutting in small piece the food). During the phase of assisted eating patients have to stay in a dedicated room for one hour after eating and do not have access to a bathroom to address the urge to vomit after eating.

One of the principal aims of treatment is to help patients to feel in control during all the phase of weight regain. They are therefore engaged to be active participant in deciding their BMI range goal (which is generally between a BMI of 19.0 kg/m^2 and 20.0 kg/m^2) and the nature of their diet following the weight regain guideline. Generally, the first week of treatment the energy intake is set at 1.500 kcal per day, and 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, the energy intake is adjusted collaboratively on the basis of patients' rate of weight regain, the goal being a gain of 1.0 kg to 1.5 kg per week. If patients will need intake over 2.500 kcal per day to achieve this, they are given the option of doing so using normal food alone or with

the addition of high-energy supplementary drinks. Once their weight is near a BMI of 18.5 kg/m^2 the energy intake is gradually reduced in order to reach and maintain the body weight within the goal BMI range. Since the treatment is voluntary, we do not use nasograstric tube feeding or parenteral nutrition to address undereating and underweight. If patients is not being able to eat the meals with our assistance they need another form of treatment.

In patients admitted because of binge eating and purging that has proved impossible to control on an outpatient basis, assisted eating is designed to show them that they can eat a normocaloric diet comprising three meals and a snack without gaining weight and that they can eat these meals without binge eating or purging. This help also them to understand that some processes encouraging binge eating and purging operate at home and that these will need to be addressed later during the treatment to avoid a relapse.

Not Assisted Eating

When the period of assisted eating is over patients begin to eat without assistance and outside the unit. In this phase, patients choose their food like in a self-service restaurant the unit, and have free access to the bathroom. From week 14, patients live outside the hospital and are helped to address residual dietary rules and encouraged to follow an elastic dietary plan to maintain their weight in the planned range. During the final weeks of treatment patients spend some weekends at home and gradually consume all meals are outside the hospital.

Individual Sessions with Psychologist

A psychologist trained in CBT-E conducts individual CBT-E sessions. Each session lasts 50 minutes. The frequency of the sessions, as outpatient CBT-E, is twice weekly in the first four weeks and then once a week. The sessions, as in standard CBT, have the following structure:

- Reviewing the homework
- Setting the agenda
- Working through the agenda
- Confirming the homework, summarizing the session and arranging the next appointment
- The topics addressed during individual CBT-E sessions are the following:
    - Helping patients adjust to and accept the rapid changes in shape and weight
    - Building the personal formulation and using the monitor record in real time
    - Addressing the over-evaluation of shape and weight
    - Addressing dietary restraint

- Once patients are day patients, helping them deal with events and moods that would have previously affected their eating
- If indicated addressing clinical perfectionism, core low self-esteem or interpersonal difficulties
- Preparing a post-discharge treatment plan in order to achieve a smooth transition from inpatient to outpatient CBT-E

Group Treatment Sessions

Group treatment sessions are used by to supplement the individual ones. This has the advantage of efficiency and it encourages self-disclosure, mutual support and learning from patients who are doing well, while helping patients address secrecy and shame.

Three types of group are included in the treatment:

1. *Psychoeducational groups* are twice weekday and address two main topics:
   - Facts *about* eating disorders
   - CBT *strategies* for addressing eating disorders
2. *CBT-E groups* are weekly and focus on three broad topics:
   - *Events, mood and eating group*. The group is reserved only for patients of Stages One and Two, the first six weeks of treatment. The aim of the group is to train patients in using proactive problem-solving and functional mood modulation behaviors to address events and moods that trigger changes in eating (e.g., refusing to eat), purging or dysfunctional mood modulator behaviors (e.g., self-cutting, self-burning, misusing of drugs or alcohol).
   - *Dietary restraint group*. The group is delivered by the dietician; it is reserved for patients eating without assistance, and continues until the end of the treatment. The aim of the group is supporting the work of individual CBT-E sessions in helping patients to address dietary restraint and dietary rules and to maintain the weight following elastic dietary guidelines. The intervention is particularly focused on addressing social eating (with significant others or with other patients) and on eating foods of uncertain composition, especially in place like restaurants, fast-foods, pizzerias, and bars.
   - *Over-evaluation of shape and weight group.* The group reserved for patients of Stage Three and Stage Four (from weeks 7 to 20). The aim of the group is supporting the work of individual CBT-E sessions in helping patients to address the over-evaluation of shape and weight. The group includes both education on the over-evaluation and its consequences, and specific procedures to enhance the importance of other domain for self-evaluation and to address shape checking and avoidance, and feeling fat. The group is particularly focused in helping patients to generate ideas and

skills to develop other domain for self-evaluation, to address shape comparison and avoidance, and to learn to control the eating disorder mindset.

3. *Physical exercise group.* Patients participate to physical exercise sessions twice a week, if their medical conditions will permit. The sessions are made in group in the garden (during the summer season) or in gym without mirrors in the cold seasons. They include calisthenics exercises to improve the restoration of muscle mass, elasticity and posture, and some aerobic exercise to improve the cardiovascular fitness. The physiotherapist conducting these group sessions has received training in CBT-E and in particular in how to address driven exercising, shape checking and avoidance. Patients participating to these session report that the exercise in group helped them to accept the changes of their shape, and to learn to exercise without thinking about shape, weight and calorie consumption.

Involvement of Significant Others

With adult patients significant others are seen if the patient is willing and doing so is likely to facilitate treatment. Significant others are people who have a major influence on patients' eating. There are two specific indications for involving other(s):

1. If other(s) could help the patient to change,
2. If other(s) are making it difficult for the patient to change; for example, by following a diet or making negative comments on their appearance or eating.

Typically they attend three times during the course of treatment and the aims are to encourage them to create a positive home environment that is likely to support your efforts to change.

Patients under the age of 18 years and their significant others participate in a "family module". This consists of six family sessions with the psychologist to create an optimum family environment; two family meals in the unit were patients consume meals with parents; and two sessions with the dietician to plan meals at home.

Maintenance of Change after Discharge

The treatment gives great attention to the problem of relapse after the discharge and has introduced the following element to maximize the chances that the changes made in treatment will be maintained on discharge:

- The unit is open and patients are exposed from the beginning of the treatment to many environmental triggers of their eating disorder.

- There is a day treatment phase near the end of the admission during which patients will face some of the difficulties that they will encounter after discharge (e.g., socializing with others, cooking) while still having the support of treatment.
- During the final few weeks of treatment patients spend weekends at home, again while still having the support of the hospital.
- Significant others are involved in treatment and helped to create a positive home environment for the patient.

In addition, towards the end of treatment considerable effort is put into arranging a post-discharge outpatient treatment, preferably with CBT-E so that the subsequent treatment is consistent with the treatment you made during inpatient. The ideal arrangement is for outpatient-based CBT-E to start prior to discharge so that the transfer is seamless.

A Note on Drugs

Inpatients CBT-E makes a parsimonious use of psychotropic drugs, since they do not help to reduce the core psychopathology of eating disorder. An exception is the use of antidepressants, if patients have a co-existing clinical depression, since its presence interferes significantly with the treatment of eating disorder.

Conclusions

Inpatient CBT-E represents the first attempt to apply in a real world inpatient setting the principles and the procedures of the CBT-E. The choice to adopt the new transdiagnostic cognitive behavioral theory of eating disorders in an inpatient setting has several important bases. First, several lines of evidence support the theory, at least for bulimia nervosa (Fairburn, Cooper, & Shafran, 2003). Second, CBT-BN derived from this theory and evaluated in several efficacy trials is superior to comparison treatments (National Institute of Clinical Excellence, 2004). Third, the transdiagnostic theory allows for applying the same treatment with minimal modifications to all eating disorders categories. This opportunity is particular useful in an inpatient setting, where eating disorders patients with different diagnostic categories are admitted, and it is not practical to apply distinct treatments for every eating disorder diagnostic category (Dalle Grave, 2005). Fourth, the personalized transdiagnostic formulation of the maintenance of eating disorders is a fundamental instrument for a multidisciplinary and non-eclectic team. In inpatients CBT-E, for example, therapists address some specific maintaining mechanisms of the formulation on the basis of their professional competence (e.g., dietician addresses low-weight, dietary restriction and restraint, while the psychologist addresses the over-valuation of shape, weight and eating control and

for certain patients other additional maintaining processes). In addition, therapists use the formulation as an instrument to coordinate their interventions and to work collaboratively with patients (e.g., the personal formulation is always placed in the middle of the table during the individual sessions and during the review meeting; Dalle Grave, 2005).

Inpatients CBT-E introduces several unique characteristics in the field of eating disorder treatment. The most original are use of a coherent and consistent treatment approach based on the transdiagnostic cognitive behavior theory in an inpatient setting and the use of the multidisciplinary and non-eclectic team. In comparison with standard CBT-E, from which inpatient CBT-E is derived, it adds assisted eating, groups sessions, and a CBT family module for patients younger than 18 years. These modifications may help patients non responders to outpatient therapy or in severe medical condition to regulate their food intake and to address the difficult task of weight regain in a highly structured setting. The treatment it has also been designed to not completely remove the patients from their psychosocial situations and to expose them to real life stressors. In addition, to patients is offered a post-inpatient treatment based on the CBT-E principles. All these adaptation have the potential to reduce the relapse rate after the discharge, the most important and not yet resolved problem of all the eating disorder inpatient treatment. A randomize control trial study comparing the focus and the broad forms of the inpatient CBT-E is in progress to test the effectiveness and limits of the treatment.

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