Effectiveness of psychosocial interventions in eating disorders: an overview of Cochrane systematic reviews

Etfetividade de intervenções psicossociais em transtornos alimentares: um panorama das revisões sistemáticas Cochrane

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ABSTRACT
Eating disorders are psychiatric conditions originated from and perpetuated by individual, family and sociocultural factors. The psychosocial approach to treatment and prevention of relapse is crucial. To present an overview of the scientific evidence on effectiveness of psychosocial interventions in treatment of eating disorders. All systematic reviews published by the Cochrane Database of Systematic Reviews - Cochrane Library on the topic were included. Afterwards, as from the least recent date of these reviews (2001), an additional search was conducted at PubMed with sensitive search strategy and with the same keywords used. A total of 101 primary studies and 30 systematic reviews (5 Cochrane systematic reviews), meta-analysis, guidelines or narrative reviews of literature were included. The main outcomes were: symptomatic remission, body image, cognitive distortion, psychiatric comorbidity, psychosocial functioning and patient satisfaction. The cognitive behavioral approach was the most effective treatment, especially for bulimia nervosa, binge eating disorder and the night eating syndrome. For anorexia nervosa, the family approach showed greater effectiveness. Other effective approaches were interpersonal psychotherapy, dialectic behavioral therapy, support therapy and self-help manuals. Moreover, there was an increasing number of preventive and promotional approaches that addressed individual, family and social risk factors, being promising for the development of positive self-image and self-efficacy. Further studies are required to evaluate the impact of multidisciplinary approaches on all eating disorders, as well as the cost-effectiveness of some effective modalities, such as the cognitive behavioral therapy.

Keywords: Eating disorders; Evidence-based medicine

RESUMO
Transtornos alimentares são doenças psiquiátricas originadas de e perpetuadas por fatores individuais, familiares e socioculturais. A abordagem psicossocial é essencial para o tratamento e a prevenção de recaídas. Apresentar uma visão geral das evidências científicas sobre a efetividade das intervenções psicossociais no tratamento de transtornos alimentares. Foram incluídas todas as revisões sistemáticas publicadas no Banco de Dados de Revisões Sistemáticas da Cochrane Library. Posteriormente, a partir da data menos recente destas revisões (2001), realizou-se uma busca adicional no PubMed, com estratégia de busca sensibilizada e com os mesmos descritores utilizados antes. No total, foram incluídos 101 estudos primários e 30 revisões sistemáticas (5 revisões sistemáticas da Cochrane), metanálises, diretrizes ou revisões narrativas da literatura. Os principais desfechos foram remissão de sintomas, imagem corporal, distorção cognitiva, comorbidade psiquiátrica, funcionamento psicossocial e satisfação do paciente. A abordagem cognitivo-comportamental foi o tratamento mais efetivo, principalmente para bulimia nervosa, transtorno da compulsão alimentar periódica e síndrome do comer noturno. Para anorexia nervosa, a abordagem familiar demonstrou maior efetividade. Outras abordagens efetivas foram psicoterapia interpessoal, terapia comportamental dialética, terapia de apoio e manuais de autoajuda. Além disso, houve um número crescente de abordagens preventivas e promocionais que contemplaram fatores de risco individuais, familiares e sociais, sendo promissoras para o desenvolvimento da autoimagem positiva e autoeficácia. São necessários mais estudos que avaliem o impacto de abordagens multidisciplinares em todos transtornos alimentares, além da relação custo-efetividade de algumas modalidades efetivas, como a terapia cognitivo-comportamental.

Descritores: Transtornos alimentares; Medicina baseada em evidências

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INTRODUCTION

The eating disorders have specific diagnoses, including anorexia nervosa (AN), bulimia nervosa (BN) and binge eating disorder (BED). However, subclinical forms are more frequent across all age groups. Along with subclinical forms, BED is more common than AN and BN, and due to its specific clinical manifestation and strong association with obesity, it is classified as a diagnostic category in fifth edition of the Diagnostic and Statistical Manual of Mental Disorders (DSM-V). The prevalence of BED in the United States within the period of 12 months is 1.6% for women and 0.8% for men. The prevalence between genders in BED is more similar than AN or BN, which predominate in young females. The 12-month prevalence of AN in these women is approximately 0.4%, and of BN varies from 1 to 1.5.

AN is characterized by restriction of energy intake relative to requirements, leading to a significantly low body weight; intense fear of gaining weight or of becoming fat, or persistent behavior that interferes with weight gain; disturbance in the way in which one’s body weight or shape is experienced, undue influence of body weight or shape on self-evaluation, or persistent lack of recognition of the seriousness of the current low body weight. BN is characterized by repetitive episodes of binge eating (eating an amount of food that is definitely larger than what most individuals would eat in a similar period of time under similar circumstances with a sense of lack of control), followed by compensatory behaviors (vomiting, laxative use, and excessive physical activity) in an attempt to undo the excessive intake of food, as well as a disturbance in the perception of shape and weight, like in AN. These episodes occur at least twice a week for a minimum period of 3 months. In BED, the same episodes occur with similar frequency and duration, but patients do not generally have regular compensatory behaviors to combat excessive consumption of food and often present with overweight or obesity.

The other specified eating disorder category includes other eating symptoms that result in clinically significant distress or impairment in social functioning, but do not meet the full criteria for the three categories mentioned above (AN, BN and BED). This category includes atypical AN (all criteria, except low body weight); BN of low frequency and/or limited duration; binge-eating disorder of low frequency and/or limited duration; purging disorder (compensatory behaviors without binge eating); night eating syndrome (NES – recurrent episodes of night eating, as manifested by eating after awakening from sleep or by excessive food consumption after the evening meal). The NES can be distinguished from BN and BED, mainly by the lack of compensatory behaviours associated in an attempt to counteract the excessive food intake that occurs in BN, and by the time of excessive food intake (night), unlike BED, in which binge eating episodes can occur at any time of the day.

The psychosocial interventions are important for effective eating disorders treatments in the long run, since they address psychological and social factors involved in onset and maintenance of this disorders. The cognitive behavioral therapy (CBT), e.g., was accepted as one of the main treatments for eating disorders. There is strong evidence of efficacy for bulimic symptoms (binge eating and compensatory behaviors) in BN and BED using some techniques, such as cognitive restructuring and regulation of feeding. The model of CBT for eating disorders is based on the fact that dysfunctional beliefs (regarding thinness and dissatisfaction with the physical shape and body weight) maintain the abnormal eating behavior and related characteristics, such as purgation and abuse of laxatives, diuretics and diet pills. The CBT approach is multimodal and includes nutritional counseling, psychoeducation, self-monitoring, as well as cognitive and behavioral interventions. The analysis of the family context is very relevant, especially in children and adolescents at risk. It is known that interventions that aimed at fast and timely improvement, focusing only on nutritional counseling or medication, are often not effective; thus, the approach of individual, family and social factors is required for both weight loss and regain to be achieved and maintained, depending on the type of eating disorders.

OBJECTIVE

The objectives of this article were to compile findings of relevant scientific papers, such as randomized controlled trials, systematic reviews, meta-analysis, guidelines and narrative reviews of literature, in order to promote knowledge about effectiveness of psychosocial interventions in eating disorders along time, in addition to showing the need for further research in specific areas.

METHODS

Type of study

Inclusion criteria

Randomized controlled trials (RCT), systematic reviews (SR), meta-analysis (MA), guidelines and reviews of
literature on effectiveness of psychosocial interventions in eating disorders, including patients of any age and sex, with any chronic condition diagnosed together with eating disorders, according to Russell criteria (1979), the DSM and the International Classification of Diseases (ICD). Other study designs were included, such as prevention, cohort, cost-effectiveness, rapid response, pilot study, provided they were in accordance with the outcomes examined in this study. The data were extracted from abstract or full text, when necessary.

Other study designs, such as guidelines, cost-effectiveness ratio, prospective studies, risk factors, prevention, predictors and moderators of response to treatment were included whenever appropriate and relevant for the outcomes analyzed in this research (eating disorders symptoms, personal and social functioning, psychiatric co-morbidities, cognitive distortion, body image, adherence, weight).

The tables with the findings observed are divided into subtypes of eating disorders, and one classification of eating disorders in general. This division was done in order to facilitate the organization of research. In the general table, there are studies with the three types (AN, BN and BED) and subclinical forms.

Exclusion criteria
Papers mentioned above that examined other types of interventions (neither psychological nor psychosocial), such as diets, exercise, and medication.

Types of intervention
Experimental group
Interventions of all modalities and settings including psychological or psychosocial techniques, and their combinations among themselves or with medication.

Control group
No treatment, waiting list, usual treatment (e.g. measuring weight and height, and nutritional counseling).

Type of outcomes
Primary outcome
Symptomatic remission: according to Russell (1979), DSM, ICD or standard scale (e.g. Eating Disorder Examination – EDE and Eating Disorders Examination Questionnaire - EDE-Q).

For AN: recovery of weight within the normal range (body mass index – BMI) at the end of therapy; for BN: 100% withdrawal from binge eating at the end of therapy, mean score of bulimic symptoms or frequency of binge eating at the end of treatment, weight BMI. For BED/eating disorder not otherwise specified (EDNOS), remission of bulimic symptoms, weight BMI.

Body image, cognitive distortion, psychological symptoms (anxiety, depression, obsessive compulsive symptoms), psychosocial functioning, and patient satisfaction.

Eating disorder symptom measurements using any recognized validated eating disorder questionnaire or interview schedule, e.g. the Morgan Russell Assessment Schedule (Morgan, 1988), Eating Attitudes Test (EAT; Garner, 1979), Eating Disorders Inventory (Garner, 1983; Garner, 1991).

Secondary outcomes: adverse effects
Search strategy
An initial search was made in the Cochrane Database of Systematic Reviews (CDSR) of the Cochrane Library. The keywords used were “anorexia nervosa”, “bulimia nervosa”, “binge eating disorder”, “night eating syndrome” and “eating disorders”. All SR that included psychological or psychosocial interventions were included.

Later, the same keywords were searched at PubMed with limits of date (2001 to October 2013), considering that 2001 is the least recent update of CDSR, and type of studies: RCT, SR and MA. All primary studies, SR, MA and literature reviews addressing psychological or psychosocial interventions were included. Then, the literature after 2001 was searched based on types of eating disorders and outcomes, to provide an overview of evidence along time (before and after 2001), taking into account that the CDSR conducts an extensive search of primary studies, including unpublished literature, ongoing clinical trials and conference proceedings. Likewise, the PubMed database covers a considerable amount of scientific publications. Both searches allowed to have an overview of psychosocial techniques for eating disorders, based on studies published over time, as demonstrated throughout this article and especially in the tables of findings (Appendix 1).

We searched for additional data. In sources of guidelines, we searched: National Institute for Health and Clinical Excellence (NICE), Scottish Intercollegiate Guidelines Network (SIGN), Royal College of Physicians, Royal College of General Practitioners, Royal College
of Nursing, NHS Evidence, Health Protection Agency, World Health Organization, National Guidelines Clearinghouse, Guidelines International Network, TRIP database, GAIN, NHS Scotland National Patient Pathways, New Zealand Guidelines Group, Agency for Healthcare Research and Quality (AHRO), Institute for Clinical Systems Improvement (ICSI), National Health and Medical Research Council (Australia), Royal Australian College of General Practitioners (RACGP), British Columbia Medical Association, Canadian Medical Association (CMA), Alberta Medical Association, University of Michigan Medical School, Michigan Quality Improvement Consortium, Ministry of Health of Singapore, National Resource for Infection Control, Patient UK Guideline links, UK Ambulance Service Clinical Practice Guidelines, RefHELP NHS Lothian Referral Guidelines, MEDLINE (with guideline filter), Driver and Vehicle Licensing Agency and NHS Health at Work (occupational health practice).

As sources of health technology assessment and economic appraisals, we had: NIHR Health Technology Assessment programme, The Cochrane Library, NHS Economic Evaluations, Health Technology Assessments, Canadian Agency for Drugs and Technologies in Health and International Network of Agencies for Health Technology Assessment. As sources of RCT, we used The Cochrane Library, Central Register of Controlled Trials and MEDLINE (with RCT filter). Bandolier, Drug & Therapeutics Bulletin, TRIP database and Central Services Agency COMPASS Therapeutic Notes were sources of evidence-based reviews and evidence summaries; Department of Health and Health Management Information Consortium (HMIC) were sources of national policy.

Review selection
The two authors independently assessed the titles and abstracts found in the Cochrane Database of Systematic Reviews of The Cochrane Library and at PubMed. Differences were resolved by discussion to reach consensus.

Data analysis
The authors used the data extraction tables they prepared and analyzed each diagnosis of eating disorders separately, whenever possible, since the analyzed outcomes were different for each specific diagnosis. Data on population, interventions and outcomes were independently extracted and qualitatively analyzed. Differences were resolved by discussion to reach consensus. Individual narrative review summaries were used to present the results. A brief summary of the main findings was included in the discussion section. For more information on psychosocial techniques that are shown in the boxes, see the table of findings (Appendix 1).

RESULTS
The Cochrane Library
We identified five Cochrane SR on the treatment of eating disorders.\(^{(6-10)}\) The data of the last update and studies included in Cochrane SR are showed in table 1. The updates of the first version and subsequent versions of each Cochrane SR are done from time to time and may change or not the results of the current version. The main characteristics of the Cochrane SR are shown in appendix 2. The psychosocial interventions evaluated in Cochrane SR were self-help and guided self-help for eating disorders, family therapy and individual psychotherapy for AN, antidepressants versus psychological treatments (and their combination) for BN, and psychological treatments for BN and binging (binge eating). The results of the main outcomes analyzed are in appendix 3. The results of these five Cochrane SR are limited by their updates.

Cochrane systematic reviews on anorexia nervosa
Family therapy showed reduction of symptoms after intervention in two short studies (lasting less than 12 months) as compared to usual care. When compared to psychological interventions, as cognitive behavior therapy (CBT), cognitive analytic group, ego-oriented psychotherapy, individual supportive therapy, no differences were found in four trials, as shown in appendix 3. However, in one study, that compared family therapy with individual supportive therapy, the participants were separated by age and duration of disease; significant results in remission of symptoms were found in younger people with an age of onset less than 18 years and less than 3 years of duration of disease with 21 participants (Group 1). The results were also significant in Group 1 for weight gain, but these two results were not significant at 5-year follow-up. In other Cochrane SR of psychotherapies for AN (not family therapy), there was insufficient evidence in comparisons to seven studies: focal psychoanalytic therapy, interpersonal psychotherapy (IPT), cognitive analytical therapy, cognitive therapy, CBT and behavioural therapy.
Cochrane systematic reviews on bulimia nervosa and on binge eating disorder

**Bulimia nervosa**

When psychotherapy alone was compared to medication, there was better remission in five studies; the dropout rates were higher in the antidepressant group in four studies as shown in appendix 3. The combined treatments compared to medication alone showed a better remission in the short run in four studies; also in combined treatments, the dropout rates were higher for medication alone than combined treatments, in four studies. The combined treatments compared to psychotherapy alone showed a better remission; however, in combined treatments, the dropouts were higher than psychotherapy alone in six studies.

**Bulimia nervosa and binge eating**

The CBT (mainly CBT-BN) showed significant results in remission as compared to the waiting list/no treatment in 8 studies, as well as in mean bulimic symptoms in 12 studies. Besides, CBT showed improvement in depression symptoms as compared to the waiting list in seven studies, as shown in appendix 3. Comparing to others psychotherapies, IPT, behavioral therapy (BT), exposure and response prevention, hypnобehavioral therapy, supportive therapy, behavioral weight loss treatment, CBT was favored for remission symptoms in ten studies. When only studies of BN were considered, the difference was significant in seven studies. Moreover, when comparing CBT to others psychotherapies (all cited above plus non-directive counseling, supportive-expressive therapy, and weight loss therapy), CBT showed significant improvement in mean bulimic symptoms in 15 studies. Other psychotherapies showed some benefits, mainly IPT, in reducing binge eating in the long run as compared to no treatment. Self-help based in CBT approaches also resulted in some benefits. However, for weight variations, individual psychotherapy showed little or no reduction. Only BT for weight loss showed a trend in this direction in the subgroup of overweight patients and with BED.

**Cochrane systematic reviews on eating disorder**

In Cochrane SR about pure self-help and guided self-help, the two types showed improvement as compared to waiting list for two studies about other eating disorder

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**Table 1. Cochrane systematic reviews for treatment of eating disorders**

| Systematic review                                                                 | Update               | Number of studies | Number of participants | Studies                                                                 |
|----------------------------------------------------------------------------------|----------------------|-------------------|------------------------|------------------------------------------------------------------------|
| Anorexia nervosa                                                                 |                      |                   |                        |                                                                        |
| Family therapy for those diagnosed with anorexia nervosa. Fisher et al.⁶¹        | July 31, 2008        | 13                | 638                    | Hall, 1987; Russell, 1987; Crisp, 1991; le Grange, 1992; Robin, 1999; Espier, 2000; Espina, 2000; Geist, 2000; Dare, 2001; Whitney unpublished, 2001; Bell, 2004; Lock, 2005; Rausch, 2006 |
| Individual psychotherapy in the outpatient treatment of adults with anorexia nervosa. Hay et al.⁶⁵ | Feb 11, 2008         | 7                 | 261                    | Channon, 1989; Treasure, 1995; Serfaty, 1999; Bachar, 1999; Dare, 2001; Sergh, 2002; McIntosh, 2005 |
| Bulimia nervosa                                                                  |                      |                   |                        |                                                                        |
| Antidepressants versus psychological treatments and their combination for bulimia nervosa. Hay et al.⁶⁸ | Aug 12, 2001         | 7                 | 343                    | Mitchell, 1990; Fichter, 1991; Agras, 1992; Leitenberg, 1994; Russell, 1995b; Goldbloom, 1996; Walsh, 1997 |
| Psychological treatments for bulimia nervosa and binging. Hay et al.⁷⁶           | May 31, 2007         | 48                | 3,054                  | Kirkley, 1985; Ordman, 1985; Wilson, 1986; Fairburn, 1986; Lee, 1986; Laessle, 1987; Freeman, 1988; Leitenberg, 1988; Bossert, 1989; Agras, 1989; Telch, 1990; Laessle, 1991; Fairburn, 1991; Wilson, 1991; Wolf, 1992; Griffiths, 1993; Garner, 1993; Willfey, 1993; Thackwray, 1993; Agras, 1994; Cooper, 1995; Porzelius, 1995; Treasure, 1996; Walsh, 1997; Bulik, 1998; Peterson, 1998; Esplen, 1998; Carter, 1998; Bachar, 1999; Agras, 2000; Loeb, 2000; Nauta, 2000; Safer, 2001; Hsu, 2001; Kenardy, 2001; Telch, 2001; Willfey, 2002; Sundgot-Borgen, 2002; Palmer, 2002; Durand, 2003; Ghaderi, 2003; Gordan, 2003; Carter, 2003; Bailar, 2003; Banasiak, 2005; Burton, 2006; Ljotsson, 2007; Munsch, 2007 |
| Eating disorders                                                                  |                      |                   |                        |                                                                        |
| Self-help and guided self-help for eating disorders. Perkins et al.⁹⁹             | May 23, 2006         | 15                | 1,191                  | Huon, 1985; Treasure, 1996; Thiels, 1998; Carter, 1998; Loeb, 2000; Mitchell, 2001; Palmer, 2002; Carter, 2003; Ghaderi, 2003; Durand, 2003; Walsh, 2004; Bailar, 2004; Grilo, 2005a; Grilo, 2005b; Banasiak, 2005 |
| Total                                                                            |                      | 90                | 5,487                  |                                                                        |
symptoms (no binging or purging), and to psychiatric symptoms and interpersonal functioning, as shown in appendix 3.

**PubMed database**

The additional research was done at PubMed using the following MESH terms: “anorexia nervosa”, “bulimia nervosa”, “binge-eating disorder”, “night eating syndrome” and “eating disorders”. MA, RCT SR and data range 2001-10/2013 were used as limits. A total of 716 studies were found. To include in the table of findings (Appendix 1), we selected 101 studies and 30 SR, MA or literature review (5 Cochrane SR). The results of searches and the number of studies included in the table of findings are shown in tables 2 and 3.

These tables include at total 101 studies and 30 SR, MA, guidelines, or literature review (5 Cochrane SR).

The findings were extracted from study abstracts. There were 19 studies and 5 SR, MA, guidelines or literature review for AN (2 Cochrane SR on psychotherapies); 21 studies and 4 SR, MA, guidelines or literature review for BN (2 Cochrane SR about psychotherapies for BN and binge eating); 26 studies and 3 SR, MA, guidelines or literature review for BED; and 35 studies and 18 SR, MA, guidelines or literature review for eating disorders in general (1 Cochrane SR on self-help). The overall results of the studies included are shown in the table of findings (Appendix 1).

**Table 2. Results of searches**

| Type | The Cochrane Library | PubMed (Since 2001) | Total |
|------|----------------------|---------------------|-------|
| Primary studies | 0 | 101 | 101* |
| Systematic reviews, meta-analysis, guidelines or literature reviews | 5 | 25 | 30 |

* Six of these 101 studies were also included in the Cochrane systematic reviews (Dare, 2001; Bergh, 2002; Lock, 2005; McIntosh, 2005; Rausch, 2006; Munsch, 2007).

**Table 3. Table of findings**

| Primary studies | Anorexia nervosa | Bulimia nervosa | Binge eating disorder | Eating disorders |
|----------------|------------------|-----------------|----------------------|------------------|
| Anorexia nervosa | 19 | 21 | 26 | 35 |
| Total | 101 |

| Systematic reviews, meta-analysis, guidelines or literature reviews | Anorexia nervosa | Bulimia nervosa | Binge eating disorder | Eating disorders |
|---------------------------------------------------------------|------------------|-----------------|----------------------|------------------|
| Anorexia nervosa | 5 (2 CDSR) | 4 (2 CDSR) | 3 | 18 (1 CDSR) |
| Total | 30 |

**What works for eating disorders**

Charts 1, 2 and 3 show which psychosocial interventions were tested in the included studies. The charts also show which psychosocial interventions were tested in the included studies.

**Chart 1. What works on psychosocial interventions for eating disorders**

- **Anorexia nervosa**
  - Maudsley model of family therapy for adolescents
- **Bulimia nervosa**
  - CBT-BN for adults
  - Interpersonal psychotherapy
- **CBT-based self-help**
- **Eating disorders**
  - CBT + fluoxetine
  - Enhanced cognitive behavior therapy/ transdiagnostic CBT (CBT-E)
- **Binge eating disorder**
  - CBT-BED for adults
  - CBT-based self-help
  - Interpersonal psychotherapy
  - Dialectical behaviour therapy DBT-BED

**Chart 2. What may work on psychosocial interventions for eating disorders**

- **Anorexia nervosa**
  - Family therapy for adolescents
  - Supportive psychotherapy
  - CBT for relapse prevention in adults
  - CBT-E for hospitalized adults
  - Focal psychoanalysis for adults
  - CBT + fluoxetine
- **Bulimia nervosa**
  - Internet-based CBT
  - Manual-based CBT via telemedicine
  - Stepped care + CBT
  - Emotional and social mind training group
- **Eating disorders**
  - Internet-delivered program for weight loss and eating disorders attitudes/behaviors in adolescents
  - Readiness and motivation therapy
  - CBT for weight management and eating disorders in children and adolescents
  - Interventions for treatment and prevention of body image and eating problems
  - Cognitive dissonance-based interventions
  - Psychoeducational training program in affective regulation
  - Dialectical behaviour therapy for concurrent eating disorders and substance abuse disorders
  - Short stepwise CBT for low self-esteem
  - Media literacy programs
  - Identity intervention programme to build new positive self-schemes
  - Children’s picture book to promote positive body image in young children
  - Mindfulness-based interventions
- **Binge eating disorder**
  - Self-help based CBT
  - CBT delivery for overweight individuals with BED
  - Brief motivational interventions + self-help
  - Behavioural weight loss treatment
  - Combined treatments (CBT + medications – fluoxetine, topiramate, sertraline, orlistat)

CDSR: Cochrane Database of Systematic Reviews.
Effective psychosocial interventions in eating disorders: an overview of Cochrane systematic reviews

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criticism towards the eating behavior of adolescents, it is recommended to avoid their presence in the initial sessions. For adults, the Maudsley family therapy should be better adapted in new studies. Some options of individual psychotherapies that may work for AN are focal psychoanalysis, CBT and supportive psychotherapy. In one multicenter study, the focal psychodynamics and CBT were compared in outpatients’ setting. Besides, the CBT may work for adults after hospital discharge to prevent relapse, and for inpatients with severe AN. The combination of CBT plus fluoxetine may help patients that already achieved a normal weight to maintain it. The best predictors found in a study of weight maintenance in weight-restored AN patients were the level of weight restoration after concluding the acute treatment and avoiding weight loss immediately after intensive treatment. In acute anorexia, low-dose antipsychotic medication may help, mainly for anxious and obsessive symptoms.

Bulimia nervosa, binge eating disorder, and night eating syndrome

For BN, BED and the subclinical forms of these disorders, CBT is the most effective psychotherapy in reduction of associated behaviors, such as binge eating and purging. Adaptations of CBT were made especially for BN and BED (CBT-BN and CBT-BED). These approaches were made for adults, but they may be applied to older adolescents. The IPT is also effective to alleviate symptoms, mainly in the long run. The family therapy approaches showed benefits in bulimic adolescent patients, although they seem to be more effective in those with less associated psychopathology. Moreover, fluoxetine is effective to ameliorate of BN symptoms in the short run. The CBT can be offered in self-help (guided or not), and also can be addressed in different formats, such as computer software, CD-ROMs, internet, e-mail, telemedicine, telephone, short message service (SMS).

Anorexia nervosa

The effective psychotherapy in AN was short-duration family therapy, mainly the Maudsley family therapy for adolescents. In the Maudsley approach, the family plays a key role in recovery of patients with anorexia. For adolescents with severe obsessive-compulsive symptoms, the long-term family therapy can be more effective. When the parents clearly express much

Chart 3. Insufficient evidence of psychosocial interventions in eating disorders

| Anorexia nervosa | Bulimia nervosa | Eating disorder |
|------------------|----------------|-----------------|
| Maudsley Model of Family Therapy for adults | Appetite-focused dialectical behavior therapy | Multidisciplinary care for all eating disorders in primary care |
| Exposure therapy intervention focused on meal consumption | Binge eating disorder | Longitudinal effects of media exposure of eating disorders symptoms |
| Bulimia nervosa | Abstinence from binge eating and permanent weight loss | |
The new “enhanced” version of the treatment (CBT-E) is an approach developed for all eating disorders and subclinical forms, drawn from the CBT-BN and taking into account transdiagnostic perspective of these disorders. This means that all eating disorders sharing the same core cognitive psychopathology – excessive value given to physical appearance and weight, which distinguishes them from other psychiatric disorders and is responsible for maintaining eating disorders. It is called “enhanced” because it broadly describes strategies to increase compliance and have better treatment outcomes, dealing with some issues, such as humor intolerance, perfectionism, low self-esteem, and interpersonal difficulties.

There is a growing number of studies addressing the association between weight control and eating disorders, especially in BED. Only the behavioral weight loss treatment may work for weight loss. Patients with BED do not generally have regular compensatory behaviors to combat excessive consumption of food, as BN patients do, and are often overweighted or obese. Due to the prevalence among eating disorders and strong association with obesity, BED is in DSM-V as a separate diagnostic category, and is no longer included in the EDNOS section, which facilitate its identification and treatment. The combination of psychosocial interventions and medications may be necessary to achieve both weight loss and reduced binge eating, and possible relief of depressive and anxiety symptoms. Some combined treatments include the following drugs: fluoxetine, topiramate, sertraline and orlistat. These combined treatments showed a reduction in weight loss in the short run, although there may be some side effects.

Furthermore, the new constellation of eating symptoms that shows sufficient data in order to be included as a clinical condition in DSM-V, and that presents strong association with obesity is NES, as mentioned in the section of Feeding and Eating Conditions not Elsewhere Classified. NES is manifested by recurrent episodes of the night eating, like eating after awakening or excessive food consumption after the evening meal. Patients are aware of the episodes and recall them. NES is positively associated with stressful events, and the greater the degree of obesity, the greater the chance of having this syndrome. There is also indication of a significant correlation between NES and sleep disorders, anxiety and depression. For NES, a pilot study of CBT may work in decreasing the number of nocturnal ingestions and calorie intake after dinner. Behavioral strategies and brief relaxation also may work for reducing NES symptoms.

Eating disorders

Further studies about eating disorders are required, and they should address intervention and prevention techniques, in addition to risk factors, such as physical appearance, weight and eating concerns, as well as body image disturbance and internalization of media patterns, including both sexes and all age groups, since the current studies enrolled very few men and usually address older adolescents or adults.

Furthermore, some studies were found on the construction of positive schemes on self-image and general aspects in female adults (and children and adolescents), that could be included in the school syllabus to prevent the development of eating disorders and mental dysfunctions related to body, eating behaviors and self-efficacy.

Finally, it is necessary to dissemination the effective interventions for eating disorders offered by healthcare professionals, who are not specialized, aiming to promote multidisciplinary care, especially in primary health care. Many patients with eating disorders do not receive appropriate treatment or seek intervention for weight loss, in case of BN, BED and subclinical forms.

CONCLUSION

The studies included described the cognitive behavior approach as the most effective modality of psychological intervention. Others interventions that showed effectiveness were dialectical behavioral therapy, interpersonal therapy, family-based interventions and supportive therapies. The manual-based self-help is an intervention often effective and can be provide in different ways for prevention and treatment of eating disorders.

The binge eating disorder should be treated as a separate category of eating disorder, according to the DSM-V, and the night eating syndrome as a group of significant eating symptoms.

The effectiveness of psychosocial interventions for eating disorders may vary depending on the clinical features of patients, such as the level of chronicity and the biological and psychosocial co-morbidities. There is an increasing number of interventions that include eating disorder symptoms related to body image, concern about appearance and weight, self-esteem, as well anxiety and depression symptoms, which enhance applicability of these results in the clinical practice.

Taking into account the multifactorial etiology of eating disorders and the high prevalence of subclinical forms, the investigations are increasingly addressing interventions to prevent the development of these
disorders by considering the individual, family and social risk factors. Yet, approaches that aim to build positive self-concept and self-image must be fostered.

For future research, it is important to report on knowledge about cognitive behavioral intervention techniques and other psychosocial approaches of eating disorders for different professionals, in various settings, in order to foster a multidisciplinary approach. Further studies analyzing cost-effectiveness of cognitive behavioral therapy and behavioral weight loss therapy are necessary. Investigations on psychosocial interventions for night eating syndrome are required, since there are significant clinical eating symptoms. And, the impact of the media should be investigated in future longitudinal studies.

REFERENCES

1. American Psychological Association (APA), editor. Diagnostic and statistical manual of mental disorders. 5th ed. Washington, DC: American Psychological Association; 2013.

2. Fairburn CG, Cooper Z, Shafran R, Wilson GT. Transtorno da alimentação: um protocolo transdiagnóstico. In: Barlow DH, editor. Manual clínico dos transtornos psicológicos: tratamento passo a passo. 4a ed. Traduzido por Roberto Catalado Costa. Porto Alegre: Artmed; 2009. p. 577-614.

3. Oliveira IT. Transtornos alimentares em crianças e adolescentes: intervenções preventivas e psicoterapêuticas. In: Melnik T, Atallah A, editors. Psicologia baseada em evidências: provas científicas da efetividade da psicoterapia. São Paulo: Santos; 2011. p. 67-82.

4. Cahn SC, McFillin RK. Eating disorders. In: DiTomasso RA, Golden BA, Morris HJ, editors. Handbook of cognitive-behavioral approaches in primary care. New York: Springer Publishing Company; 2010. p. 501-23.

5. Palavras MA, Kaio GH, Mari Jde J, Claudino AM. Uma revisão dos estudos latino-americanos sobre o transtorno da compulsão alimentar periódica. Rev Bras Psiquiatr. 2011;33 Suppl 1:581-108. Review.

6. Fisher CA, Hetrick SE, Rushford N. Family therapy for anorexia nervosa. Cochrane Database Syst Rev. 2010;(4):CD004780. Review.

7. Hay P, Bacaltchuk J, Claudino A, Ben-Tovim D, Yong P. Individual psychotherapy in the outpatient treatment of adults with anorexia nervosa. Cochrane Database Syst Rev. 2003;(4):CD003909. Review.

8. Bacaltchuk J, Hay P, Trefiglio R. Antidepressants versus psychological treatments and their combination for bulimia nervosa. Cochrane Database Syst Rev. 2001;(4):CD003385. Review.

9. Hay PP, Bacaltchuk J, Stefano S, Kashyap P. Psychological treatments for bulimia nervosa and bingeing. Cochrane Database Syst Rev. 2009;(4):CD000562. Review.

10. Perkins SJ, Murphy R, Schmidt U, Williams C. Self-help and guided self-help for eating disorders. Cochrane Database Syst Rev. 2006;(3):CD004191. Review.

11. Russell GF, Szmukler GI, Dare C, Eisler I. An evaluation of family therapy in anorexia nervosa and bulimia nervosa. Arch Gen Psychiatry. 1987;44(12):1047-56.

12. Lock J, Le Grange D, Agras WS, Dare C. Treatment manual for anorexia nervosa: A family-based approach. New York: Guildford Publications; 2001.

13. Le Grange D, Binford R, Loeb KL. Manualized family-based treatment for anorexia nervosa: a case series. J Am Acad Child Adolesc Psychiatry. 2005;44(1):41-6.

14. Couturier J, Kimber M, Sztatmari P. Efficacy of family-based treatment for adolescents with eating disorders: a systematic review and meta-analysis. Int J Eat Disord. 2013;46(1):3-11. Review.

15. Keel PK, Haedt A. Evidence-based psychosocial treatments for eating problems and eating disorders. J Clin Child Adolesc Psychol. 2008;37(1):39-61.

16. Lock J, Le Grange D, Agras WS, Moye A, Bryson SW, Jo B. Randomized clinical trial comparing family-based treatment with adolescent-focused individual therapy for adolescents with anorexia nervosa. Arch Gen Psychiatry. 2010;67(10):1025-32.

17. Godart N, Berthoz S, Curt F, Ferderseau F, Rein Z, Wallier J, et al. A randomized controlled trial of adjunctive family therapy and treatment as usual following inpatient treatment for anorexia nervosa adolescents. PLoS One. 2012;7(1):e28249.

18. Schmidt U, Oldershaw A, Jichi F, Sternheim L, Startup H, McIntosh V, et al. Out-patient psychological therapies for adults with anorexia nervosa: randomised controlled trial. Br J Psychiatry. 2012;201(5):392-9.

19. Lock J, Agras WS, Bryson S, Kraemer HC. A comparison of short- and long-term family therapy for adolescent anorexia nervosa. J Am Acad Child Adolesc Psychiatry. 2005;44(7):632-9.

20. Eisler I, Simic M, Russell G, Dare C. A randomised controlled treatment trial of two forms of family therapy in adolescent anorexia nervosa: a five-year follow-up. J Child Psychol Psychiatry. 2007;48(6):552-60.

21. Dare C, Eisler I, Russell G, Treasure J, Dodge L. Psychological therapies for adults with anorexia nervosa: randomised controlled trial of out-patient treatment. Br J Psychiatry. 2001;178:216-21.

22. Pike KM, Walsh BT, Vitousek K, Wilson GT, Bauer J. Cognitive behavior therapy in the posthospitalization treatment of anorexia nervosa. Am J Psychiatry. 2003;160(11):2046-9.

23. Bulik CM, Berkman ND, Brownley KA, Sedway JA, Lohr KN. Anorexia nervosa treatment: a systematic review of randomized controlled trials. Int J Eat Disord. 2007;40(4):310-20. Review.

24. Varchol L, Cooper H. Psychotherapy approaches for adolescents with eating disorders. Curr Opin Pediatr. 2009;21(4):457-64. Review.

25. Wild B, Friederich HC, Gross G, Teufel M, Herzog W, Giel KE, et al. The ANTOP study: focal psychodynamic psychotherapy, cognitive-behavioural therapy, and treatment-as-usual in outpatients with anorexia nervosa - a randomized controlled trial. Trials. 2009;10:23.

26. Dalle Grave R, Calugi S, Conti M, Doll H, Fairburn CG. Inpatient cognitive behaviour therapy for anorexia nervosa: a randomized controlled trial. Psychother Psychosom. 2013;82(6):390-8.

27. Kaplan AS, Walsh BT, Olmsted M, Attia E, Carter JC, Devlin MJ, et al. The slippery slope: prediction of successful weight maintenance in anorexia nervosa. Psychiatr Med. 2009;39(6):1037-45.

28. Yu J, Stewart Agras W, Halmi KA, Crow S, Mitchell J, Bryson SW. A 1-year follow-up of a multi-center treatment trial of adults with anorexia nervosa. Eat Weight Disord. 2011;16(3):e177-81.

29. Hay PJ, Claudino AM, Clinical psychopharmacology of eating disorders: a research update. Int J Neuropsychopharmacol. 2012;15(2):209-22. Review.

30. Steinglass J, Sysko R, Schebendach J, Broft A, Strober M, Walsh BT. The application of exposure therapy and D-cycloserine to the treatment of anorexia nervosa: a preliminary trial. J Psychiatr Pract. 2007;13(4):238-45.

31. National Collaborating Centre for Mental Health (UK). Eating disorders: core interventions in the treatment and management of anorexia nervosa, bulimia nervosa and related eating disorders. Leicester (UK): British Psychological Society (UK); 2004.

32. Shapiro JR, Reba-Harrelson L, Dymek-Valentine M, Woolson SL, Hamer RM, Bulik CM. Feasibility and acceptability of CD-ROM-based cognitive-behavioural treatment for binge-eating disorder. Eur Eat Disord Rev. 2007;15(3):175-84.
35. Mitchell JE, Crosby RD, Wonderlich SA, Crow S, Lancaster K, Simonich H, et al. A randomized trial comparing the efficacy of cognitive-behavioral therapy for bulimia nervosa delivered via telemedicine versus face-to-face. Behav Res Ther. 2008;46(5):581-92.

36. Sánchez-Ortiz VC, Munro C, Stahl D, House J, Startup H, Treasure J, et al. A randomized controlled trial of internet-based cognitive-behavioural therapy for bulimia nervosa or related disorders in a student population. Psychol Med. 2011;41(2):407-17.

37. Carrard I, Rouget P, Fernández-Aranda F, Volkart AC, Damoiseau M, Lam T. Evaluation and deployment of evidence based patient self-management support program for Bulimia Nervosa. Int J Med Inform. 2006;75(1):101-9.

38. Schmidt U, Landau S, Pombo-Carril MG, Bara-Carril N, Reid Y, Murray K, et al. Does personalized feedback improve the outcome of cognitive-behavioural guided self-care in bulimia nervosa? A preliminary randomized controlled trial. Br J Clin Psychol. 2006;45(Pt 1):111-21.

39. Bauer S, Okon E, Meermann R, Kordy H. Technology-enhanced maintenance of treatment gains in eating disorders: efficacy of an intervention delivered via text messaging. J Consult Clin Psychol. 2012;80(4):700-6.

40. Lynch FL, Striegel-Moore RH, Dickerson JF, Perrin N, Debar L, Wilson GT, et al. Cost-effectiveness of guided self-help treatment for recurrent binge eating. J Consult Clin Psychol. 2010;78(3):322-33.

41. Crow SJ, Mitchell JE, Crosby RD, Swanson SA, Wonderlich S, Lancaster K. The cost effectiveness of cognitive behavioral therapy for bulimia nervosa delivered via telemedicine versus face-to-face. Behav Res Ther. 2009;47(6):451-3.

42. Robinson AH, Safer DL. Moderators of dialectical behavior therapy for binge eating disorder: results from a randomized controlled trial. Int J Eat Disord. 2012;45(4):597-602.

43. Safer DL, Robinson AH, Jo B. Outcome from a randomized controlled trial of group therapy for binge eating disorder: comparing dialectical behavior therapy adapted for binge eating to an active comparison group therapy. Behav Ther. 2010;41(1):106-20. Erratum in: Behav Ther. 2010;41(3):432. Robinson, Athena Hagler [added].

44. Grilo CM, Masheb RM. Rapid response predicts binge eating and weight loss in binge eating disorder: findings from a controlled trial of orlistat with guided self-help cognitive behavioral therapy. Behav Res Ther. 2007;45(11):2537-50.

45. Bener LA, Allison KC. Behavioral management of night eating disorders Psychol Res Behav Manag. 2013;6:1-8.