

## ARTICULO DE REVISION

### Trastornos Alimentarios y Terapia de la Conciencia Corporal Basal: un enfoque de “Fisioterapia en Salud Mental”

### Eating Disorders and Basic Body Awareness Therapy: A “Physiotherapy in Mental Health” approach

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## RESUMEN

La Terapia de la Conciencia Corporal Basal intenta lograr la calidad del movimiento corporal a través de patrones motores musculares libres de presión y tensión, con el objetivo de promover la conciencia corporal y optimizar el esquema corporal de la persona. El objetivo de esta revisión narrativa de la literatura es determinar los beneficios que la Terapia de la Conciencia Corporal Basal puede brindar en el tratamiento de los trastornos alimentarios. Los estudios incluidos en esta revisión de la literatura respaldaron la eficacia de la Terapia de la Conciencia Corporal Basal como terapia adyuvante de los Trastornos Alimentarios, aunque muchos estudios tienen importantes limitaciones con respecto a su metodología. El papel del fisioterapeuta está ganando protagonismo en el tratamiento de pacientes con Trastornos Alimentarios, ya que las técnicas fisioterapéuticas como la Terapia de la Conciencia Corporal Basal proporcionan una mejora significativa en la calidad de vida, los síntomas psiquiátricos y la salud física de los pacientes afectados.

**Palabras Clave:** Terapia de la Conciencia Corporal Basal, Trastornos Alimentarios, Salud Mental, Fisioterapia.

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## ABSTRACT

The Basic Body Awareness Therapy attempts to achieve the quality of body movement through muscular motor patterns free of pressure and tension with the aim of promoting body awareness and optimizing the person's body scheme. The aim of this narrative review of the literature is to determine the benefits that Basic Body Awareness Therapy can provide as a treatment for Eating Disorders. The studies including in this review of the literature supported the efficacy of Basic Body Awareness Therapy as an adjunctive therapy of Eating Disorders, but many studies have important limitations regarding their methodology. The role of the Physiotherapist is gaining prominence in the treatment of patients with Eating Disorders, as physiotherapeutic technics such as Basic Body Awareness Therapy provide significant improvement in the quality of life, psychiatric symptoms, and physical health of the affected patients.

**Keywords:** Basic Body Awareness Therapy, Eating Disorders, Mental Health, Physiotherapy.

## INTRODUCTION

The Basic Body Awareness Therapy (BBAT), developed by Gertrud Roxendal, attempts to achieve the quality of body movement through muscular motor patterns free of pressure and tension with the aim of promoting body awareness and optimizing the person's body scheme (1). This intervention approach in physiotherapy is used for musculoskeletal disorders (2), neurological sequelae (3), chronic pain (4), concentration problems (5), socio-emotional problems (violence - sexual abuse) (6), and psychiatric diseases (7).

The consensus on core phenomena and statements describing BBAT, which was reached among 21 BBAT experts from 10 European countries, grouped the 138 core phenomena in three categories: clinical core, historical roots, and research and evaluation phenomena. The clinical core itself, comprised of 106 phenomena, was clustered in three categories: movement quality, movement awareness practice, and movement awareness therapy and pedagogy (1). This consensus provides clarity in the vocabulary used and its fundamental theories. Conversely, there is still much to explore regarding the neurophysiological and cognitive basis of this approach.

The psychiatric illnesses that benefit from BBAT are Major Depression (8), Schizophrenia (9), Bipolar Disorder (10) and Eating Disorders (7).

Eating disorders mainly include anorexia nervosa and bulimia nervosa (11). Anorexia nervosa is a clinical condition of self-starvation, where affected people are underweight and engaged in behaviors to avoid weight gain. People with bulimia nervosa are not underweight, and are in a cycle of binge eating and purging and/or compulsive exercise (12). Epidemiological data reveal that the majority of people suffering from this group of disorders are female. In the western world, the prevalence of anorexia nervosa ranges between 0.2% and 0.8% of the general population, and between 1% and 2% of female teenagers (13). Research conducted in the United States of America on English-speaking Americans on the prevalence of eating disorders found that 0.9% of women and 0.3% of men have experienced anorexia nervosa in their lifetime, while the rate for bulimia nervosa is 1.5% for women and 0.5% for men (14).

The risk is particularly high in women between 12 and 30 years of age, bullying and other forms of psychological trauma appear to have a role in the etiology of this disorder, which has repercussions on the emotional and social domain of the individual, effecting changes in their self-esteem, their identity and their personal autonomy of the patients. The diagnoses of anorexia nervosa and bulimia nervosa share the traits of the loss of the self-image and the body scheme (13).

In addition to the main diagnostic features of anorexia nervosa and bulimia nervosa, a change in the respiratory pattern has been identified, which causes significant muscle tension that can result in a disturbance in the body scheme. Roxendal developed the concept of body awareness in physiotherapy and defined it as the perception of sensation, impulses, feelings and reactions originated from the body. The goal of the body awareness is to integrate the body to the experience of itself (15).

The aim of this narrative review is to present an overall picture of the benefits that BBAT can provide as a treatment for Eating Disorders, in order to offer guidance to psychiatrists and physiotherapists who treat these patients.

## METHODS

This is a narrative review, focusing on primary literature published in English or Spanish in the last fifteen years and selected from a PubMed, SciELO and Web of Science search. The keywords used were as follows: "eating disorders", "anorexia nervosa", "bulimia nervosa", and "basic body awareness therapy". Due to the nature of the review, we included studies with varying methodology, from small RCT to semi-structured interviews. We supplemented these articles with reviews and book chapters. We excluded articles not written in English or Spanish. All members of the research team assisted with the literature review.

### **BASIC BODY AWARENESS THERAPY (BBAT)**

The BBAT is based on the hypothesis formulated by the psychoanalyst Jacques Dropsy, who defined the movement in four dimensions: physical, physiological, psychological, and social-existential. He also used the term "triple contact problem" to define the dimension that is absent or altered in people who suffer from mental illnesses, in which the physiological dimension remains intact (7). The controlled and harmonious body movement, complemented by the correct and synchronous respiration

techniques, favor the relaxation of the autonomous nervous system (parasympathetic branch) needed to exert control over the body and the mind, in order to experience changes in the body scheme and the body image.

BBAT offers a broad approach to help people with eating disorders to perceive and prescribe their body scheme and image in a more real way, generating positive and comfortable situations from the body to allow them to discriminate their own internal sensibilities. It also starts cognitive processes (conscience, attention, memory) that act as bridges to achieve quality of movement, expression of the ego, relationships with others, and interpersonal and daily activities. As such, it is considered a neurocognitive-motor therapy (16).

In this therapy, simple and structured movements are indicated by the physiotherapist, which increase in quality, but not in quantity. Therefore, it is critical for the therapist to express in a clear manner what the patient needs to perform, and to use their words in a metaphorical sense so that the patient can connect their internal sensations and express them in the external surroundings. The initial position needs to be as comfortable as possible to initiate the body movements such as flexing/extending and vertebral rotation/contra-rotation (7). Correct breathing techniques are key to the mind-body intervention.

### **PHYSICAL-COGNITIVE APPROACH IN EATING DISORDERS**

When prescribing physical exercise, it is important to consider the clinical picture of these patients, which, besides the disturbances in the body scheme and image, frequently include pain, muscle atrophy and cramps, soft-tissue edema, changes related to chronic immobilization such as osteopenia, osteoporosis and posture changes. All these factors can limit the patient's activity and body functioning (17).

In a systematic review of the role of the physiotherapist in Eating Disorders, Rodríguez-Davila et al. found significant improvement in the psychopathological features, the body

image, and the perceived quality of life of the patients when a physiotherapist was involved in the treatment team. They concluded that there needs to be a strong emphasis in the training of physiotherapists in mental health, in order to integrate them to the multidisciplinary team involved in the management of these disorders (18).

An RCT conducted by Catalán-Matamoros et al., compared BBAT (n=14) with standard treatment (n=14) using the Eating Disorders Inventory (EDI), the Eating Attitudes Test (EAT), the Body Attitudes Test (BAT), and the "mental health" section of the Short-Form Health Survey (SF-36). In this study, BBAT was superior to standard treatment in all these measurements [(p=0,015), (p=0,012), (p=0,039), (p=0,002)] (19).

Caamaño used BBAT in 4 women (mean age of 18.75 years old) with Eating Disorders, two of them presented with a comorbid pre-existing musculoskeletal disorder. The instruments used to measure the results were the Body Image Assessment Scale-Body Dimensions (BIAS-BD), the BAT and the 12-Item Short Form Survey (SF-12). BBAT was moderately useful to improve the quality of life, but not to modify the body image or the body perception. In any case, the subjects were satisfied with the physiotherapy sessions and believed that they should be included in the multidisciplinary approach (20).

Thörnberg et al. designed an observational transversal study looking for correlation between body awareness and self-esteem. They recruited 87 patients (84 were female) with a baseline diagnosis of Eating Disorders including Anorexia Nervosa (n=26), Bulimia Nervosa (n=20) and Unspecified Feeding or Eating Disorder. The instruments used in this study were the BAT and the Interview Scale for Body Ego (ISBE). Their analysis found significant correlations between the variables [(BAT; r 0,48) – (ISBE; 0,57)]. They also found that these patients presented a limited (superficial) breathing type and a reduced body awareness. The authors concluded that the

BBAT is an ideal therapeutic tool to treat these patients and improve their quality of life (21).

Vancampfort et al., conducted a systematic review to determine the benefits of physiotherapy in people with Eating Disorders, they included different interventions, including yoga, resistance training, massage, aerobic exercises, and BBAT. The eight studies included a total of 227 subjects, but only three were deemed to have a good methodological quality, the main issues in the remaining studies were the sample size and the blinding procedures. However, their group emphasizes the importance of Physiotherapy in the management of these mental disorders, pointing that they might improve not only in their physical health, but also in their quality of life, with a decrease in psychiatric symptoms (anxiety and depression) (22).

Albertsen et al., interviewed two female patients with Binge Eating Disorders in depth during and after treatment. These patients had a history of psychological trauma and physical health problems, including obesity. They participated in BBAT sessions that were added to the usual treatment. The aim of the study was to assess how patients experienced BBAT. Both subjects described perceiving BBAT as a process to learn about their bodies in a different manner and commented that the way in which they related to their own body was changed after treatment. These changes were particularly prominent when describing emotions, movement, pain, calmness, and self-experience. The authors concluded that BBAT can be useful to improve the health of patients with Binge Eating Disorders, especially of those who suffered from childhood trauma (23).

## CONCLUSION

The studies including in this review of the literature supported the efficacy of BBAT as an adjunctive therapy of Eating Disorders. However, important limitations include low methodological qualities of some studies, a small sample size, and the heterogeneity of the studies reviewed. Further studies conducted in

this area should be designed to address these limitations: increasing the sample size and using unified criteria for the duration and the quantity of BBAT sessions.

The role of the Physiotherapist is gaining prominence in the treatment of patients with Eating Disorders, as physiotherapeutic techniques such as BBAT provide significant improvement in their quality of life, their psychiatric symptoms, and their physical health.

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