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#### THE ROLE OF COGNITIVE BEHAVIOUR THERAPY IN THE TREATMENT OF PSYCHOSOMATIC DISORDERS

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#### *Abstract*

The present paper is meant to emphasize on the one hand the connection between how the mind works and the specific diseases a person might suffer from and on the other hand the relation between psychosomatic medicine and psychotherapy. Both of them are wide interdisciplinary fields of knowledge. Whereas the psychosomatic medicine is concerned with the interaction of biological, psychological, and social factors in regulating the balance between health and disease, psychotherapy in general and cognitive-behavioural therapy in particular helps patients learn new ways to cope with and solve their problems as they gain a deeper understanding of their condition or circumstances. Patients also learn to set realistic life goals and identify and change patterns of behaviours or thoughts that have negative effects on their health and lives. The common elements of both fields should be the personalized and holistic approach to the patient, adding psychosocial assessment to the standard medical examination and the integration of psychological and psychiatric therapies in the prevention, treatment, and rehabilitation of medical disease. Different psychotherapeutic techniques from cognitive-behavioural therapy have been brought forth in this paper. They have been applied to medical patients in controlled investigations (areas that have been extensively explored are cardiovascular, gastrointestinal, pulmonary, neurological disorders, chronic pain, diabetes, and cancer). The conclusion of this study is that these interventions may improve lifestyle and self-management, treatment adherence, coping, quality of life, distress (especially depression and anxiety), course of physical illness, and reduction in utilization of medical services.

**Keywords:** psychosomatic medicine; psychotherapy; illness; patterns of behaviour; disorder;

#### 1. INTRODUCTION

Psychosomatic research as well as its application have generated a number of subdisciplines (psychooncology, psychonephrology, psychoneuroendocrinology, psychoneurogastroenterology, behavioral cardiology, psychoimmunology, psychodermatology, and others) that urged the need for a



holistic approach of diseases in general and psychosomatic disorders in particular. Moreover, it has urged to a multidisciplinary approach of any disease that requires investigations on the role of psychosocial factors affecting individual vulnerability, its course and its outcome. More than forty years ago, it has been proven that daily stressful experiences and living in big cities and industrial societies may affect the immune system and increase the vulnerability of an organism to disease. Chronic stress has emerged as a crucial factor, along with psychosocial variables, for psychosomatic diseases. Furthermore, there is this dominant view today that almost all physical diseases are potentially related to psychothermal factors.

According to DSM-V-TR (2017), in the case of psychological disorders, as well as psychosomatic disorders, identification of stressors and other psychological factors that maximize the symptoms is essential for the right diagnosis.

Today, treatment of psychosomatic disorders has increasingly been focused on the interaction of organic and psychological factors (Lacy BE, Mearin F, Chang L, et al, 2016). The aim of cognitive-behavioural therapy is not only to relieve the symptoms but also to prevent from their relapse. In treating the primary psychological factors which have a role in determining the somatic symptoms, psychotherapy can help beyond the efficacy of pharmacological treatments.

The results showed that cognitive-behavioural therapy can also be effective in treating children with psychosomatic disorders (Leibman et al, 1974). In this context, the Diagnostic Criteria for Psychosomatic Research (DCPR) have helped to translate psychosocial variables that derived from psychosomatic research into operational tools.

The aim of this review is to outline current and potential clinical applications of cognitive-behavioural therapy in the treatment of psychosomatic disorders, particularly in gastrointestinal dysfunctions. Related to the letter, we shall specifically investigate: what determine individual vulnerability to such specific disease, health attitudes of the respective subjects, psychological well-being, social support, personality factors, quality of life, illness behaviour, as well as how the cognitive behavioural therapy (CBT) has been integrated into the course of medical treatment. Moreover, specific CBT techniques shall be presented both theoretically and in the description of each case study.

## 2. PROBLEM STATEMENT

Before we further discuss the role of cognitive-behavioural therapy (CBT) on psychosomatic disorders, we define both variables. CBT refers to a class of interventions that share the basic premise that mental disorders and psychological distress are maintained by cognitive factors. This type of treatment has been pioneered by Beck (1970) and Ellis (1962). The core premise holds that maladaptive cognitions contribute to the maintenance of emotional distress and behavioural problems. According to Beck's model, these maladaptive cognitions include general beliefs, or schemas, about the world, the self, and the future, giving rise to specific and automatic thoughts in particular situations. The basic model posits that therapeutic strategies to change these maladaptive cognitions lead to changes in emotional distress and problematic behaviours. However, according to recent research (Lackner JM, Gudleski GD, Keefer L, Krasner SS, Powell C, Katz LA. 2010; Kinsinger SW, Ballou S, Keefer L, 2015), psychological therapies in general and CBT in particular has been efficient in treating psychosomatic disorders as well.

*Psychosomatic* is a medical concept that is based on diagnosis and therapy of those who are in distress and who include the data provided by the objective medical examination, biological constants, body examination data, functional explorations, corroborated with the psychological perspective and considering psychosocial factors in determinism of the disease. The term psychosomatic was created in 1830 by Heinroth but it was introduced only in the 50s in the medical discourse by Alexander and the Chicago School of Medicine. In fact, the psychosomatic orientation is Hippocratic and opposed to the vision of Galen's who treat sick and diseased organs, not sick people. Some authors consider psychosomatic a true mental approach to the patient (I.B. Iamandescu, 1999).

The simplest definition of psychosomatic disease would state that these are the physical diseases in which the psychosocial has a decisive weight. The contemporary psychosomatic investigated and accepted various mechanisms with psychoanalytic, cognitive, or adaptive roots as generators of psychosomatic sufferings. A wide variety of somatic accusations that lead to patient conviction that they

are body sufferers, despite some emotional or psychosocial problems that could be proved, still remains out of a clear definition.

Somatic discomfort has no explanation or has a partial one, despite the quasi-unanimous conviction of the patient that his sufferings originated in a definite illness that has him seek medical help and causes his disability and incapacity (Lipowski, 1986; Kleinman, 1988; Katon, 1982; Kirmayer, 1984; Kellner, 1990).

Psychosomatic disorders are local reflections of anxiety, tension and other emotions in an individual as a muscular tonus (Kazdin and Weisz, 1998). Their studies have shown the impact of CBT in the reduction of psychosomatic disorders. Clinicians have been interested in applying different methods of psychotherapy including behaviour therapy and family therapy in treating psychosomatic disorders.

Consistent with the medical model of psychiatry, the overall goal of CBT is symptom reduction, improvement in functioning, and remission of the disorder. In order to achieve this goal, the patient becomes an active participant in a collaborative problem-solving process to test and challenge the validity of maladaptive cognitions and to modify maladaptive behavioural patterns. Thus, modern CBT refers to a family of interventions that combine a variety of cognitive, behavioral, and emotion-focused techniques (e.g., Hofmann, 2011; Hofmann, Asmundson, & Beck, in press). The essential features of CBT are listed in the following table:

Symptom	Cognition	Emotion	Physical	Behaviour
Fatigue	Effort will make fatigue worse	Depression	Physically unfit	Avoids activity Focus attention
Headache	Tumor Stroke I won't cope	Anxiety	Muscular tension	Avoidance Focus attention Analgesics
Insomnia	Worries about consequence of insomnia	Anxiety	Arousal	Focus attention on not sleeping Hypnotics
Breathlessness	Suffocate Asthma attack	Anxiety	Hyperventilation	Avoidance Focus attention
Chronic pain	Damage	Depression	Physical basis of of varying significance	Avoidance Focus attention Seeks reassurance
Atypical chest pain	Heart attack	Helplessness	Hyperventilation Musculoskeletal	Avoids exertion Attention reassurance

Table I. Symptom-cognition-emotion-behaviour links for common presentations

However, since the present study is particularly focused on the irritable bowel syndrome, we shall further refer to how CBT may influence the evolution of such a disease and what are the main stressors that trigger it. The irritable bowel syndrome (IBS) is a chronic and often disabling functional bowel disorder. Psychological treatments, in particular cognitive and behavioural interventions, have been shown to be effective for this disorder. The aim of this study was to test the efficacy of a cognitive-behaviour program. Latest research indicates that the brain-gut axis plays a key role in the disorder, and the presence of psychological factors and central processing deficits contribute to symptom severity and disability. Psychological therapies as a whole have demonstrated good efficacy in reducing the severity of IBS symptoms. With regard to IBS treatment, studies show that a combination of medical treatment and psychotherapy, especially cognitive behavioural therapy, has a significant response in decreasing the symptoms. As a matter of fact, the cognitive behavioural therapy-based treatments have accompanied new challenges in the field of IBS treatment. Furthermore, a quick review of the literature reveals the necessity of defining the psychological aspect of this syndrome. Some studies show that cognitive

behavioural therapy (CBT) along with medical treatment leads to different results when compared with medical treatment alone (Brandt LJ, Chey, Lea R, Whorwell PJ., Gwee K, Leong YL, Graham C, et al. ).

One study shows that IBS needs a multi-component approach including medical treatment, diet and psychotherapy (Sarah W Kinsinger, 2017). Another study reveals that psychotherapy, especially cognitive behavioural therapy, hypnotherapy and psychoanalysis, is effective in treating IBS patients (Gwee K, Leong YL, Graham C, et al. , 1999). In the course of a similar study in Australia, 7 IBS patients received 8 sessions of cognitive behavioural therapy. Before initiating the treatment, all these patients were assessed for psychological performance and severity of gastrointestinal signs. After the treatment, it was observed that five of them did not have any IBS signs. Although the frequency of expression of symptoms by patients did not decrease, the frequency of depression and anxiety decreased, significantly. As a whole, the results indicated that cognitive behavioural therapy reduces the disability caused by IBS; however, it did not affect the expression of the symptoms by patients [9].

Cognitive-behavioral therapy (CBT) has been tested most rigorously in multiple randomized controlled trials and consistently demonstrates significant and durable effects on IBS symptoms and quality of life. Various protocols for treating IBS have been developed, and most recent advances in the field include exposure-based treatments to target symptom-specific anxiety as well as modified delivery methods, including internet-based treatment models.

Our review of meta-analytic studies examining the efficacy of CBT demonstrated that this treatment has been used for a wide range of psychological problems. In general, the evidence-base of CBT is very strong, and especially for treating anxiety disorders. However, despite the enormous literature base, there is still a clear need for high-quality studies examining the efficacy of CBT. (Stefan G. Hofmann, Anu Asnaani, Imke J.J. Vonk., Alice T. Sawyer, and Angela Fang, 2012)

### 3. RESEARCH QUESTIONS

Since IBS involves dysregulation of the brain–gut axis and this is a chronic, difficult-to-treat condition, patients often feel dismissed and frustrated because of the lack of effective medical interventions. Despite the clear benefits of CBT for IBS, very few patients have access to this specialized approach. Future efforts should focus on training mental health providers on behavioral interventions for IBS and further developing telemedicine models to improve access to care.

Another research issue related to this topic arise from Ruediger Dahlk's book, *Healing Power of Illness: Understanding What Your Symptoms Are Telling You*. His approach to illness is by suggesting that diseases are not an enemy to be fought. When we see your symptoms as bodily expressions of psychological or spiritual conflicts, we can use them as guides to inner work. The mental causes are related to a pattern of thinking, to the presence of fixed ideas, obsessions which determine us to think negatively. It is useless to treat the illness solely with medicine as long as we do not understand the mechanisms that lead us into becoming ill. So, another research question is the view according to which the power of healing starts with understanding that cause of it.

Mental positive programming would be therefore another research question although it is not necessarily related to the topic of this paper. However, another research question is regarded as being the following: does man himself possesses the key to his own healing. Could he be endowed with the power of self healing once he understands what determines it? Removing the cause and getting a better mood and a total change of attitude towards the respective illness generate the progressive healing? There are many studies which reveal the principle according to which an illness is nothing but a message for the body and the brain. Working on our view of the illness and of the world may be the first step in altering our condition.

Although we refer in this paper to psychosomatic disorders and IBS, following this perspective, we could conclude that a broad range of physical diseases and conditions may be especially prone to being made worse by mental factors. These include skin conditions such as eczema and psoriasis; high blood pressure; heart problems and more. Psychosomatic disorders frequently affect the respiratory and gastrointestinal systems as well as the cardiovascular system.

Psychosomatic disorders can have mild to severe effects on one's quality of life, from interfering with the normal ability to function to causing physical or mental disability. But it is the patient's duty to start the journey inside the clusters lingering his illness. From an enemy, illness may become an ally

revealing the inner strengths of the patient. This research question triggers further analysis not only into the mental insights connected to the illness but also into the spiritual and religious meanings.

#### **4. PURPOSE OF THE STUDY**

The general aim of the present thesis was to develop and evaluate an effective psychological treatment for IBS that can be made accessible to a large number of IBS patients. We suggested an exposure to CBT treatment based on acceptance, stress relief and cognitive restructuring along with other techniques from CBT in response to IBS related experiences. Our main focus with this study is to draw further attention upon CBT as a therapy for psychosomatic disorders and its impact on clinical practice in the foreseeable future. Currently clinicians have few options to offer people with refractory IBS, particularly in primary care. This study shows that CBT has the potential to provide significant improvement in IBS symptoms, both within a National Health Service (NHS) setting and private practice from clinicians or therapists certified on CBT interventions.

All therapies could be made nationally available from specialist therapy centres. In addition, therapists who currently work in the Improving Access to Psychological Therapy services shall be supported by the Romanian Ministry of Health to have more sessions paid by the National health Insurance Services. A second purpose of this study is to plead for an integrative approach of psychosomatic disorders, IBS in particular in order to establish:

- the weight of the psychic factor, the impact of psychosomatic disease on the patient's psyche (impairment of quality of life indices and socio-professional insertion; Anxiety waiting for disease relapses)
- personality of the patient
- the strategy to prevent or mitigate mental stress (SP)
- training methods for confronting SP and effectively influencing the symptoms of psychosomatic disease
- priority for relaxation and group participation
- means of assuring good therapeutic compliance

#### **5. CBT METHODS OF TREATMENT**

##### **5.1. Short presentation of two patients with IBS**

5.1.1. There were only two patients (one female, one male), with a diagnosis of IBS according to the Rome criteria. They didn't come to therapy to treat mainly the symptoms of IBS. They both agree to settle this as a second objective.

5.1.2. The female is a free-lancer, married, 1 child of 8 years. Her main objective in therapy is handling the anxiety attacks. Her primary complaints are related to stressful work and an inability to manage daily activities. She feels overwhelmed and cannot find the strength she needs to successfully finalize them.

Unlike the second patient, she seems not to want to establish a number of sessions, but she wanted the therapist to estimate the number of sessions needed.

The second patient is a doctor. He was administered pre-treatment on measures of psychological function and bowel symptom severity. Following a 2-week baseline period, he began a structured psychological treatment comprising eight sessions of cognitive-behaviour therapy.

Throughout treatment, participants maintained daily records of symptom severity and completed homework assignments to ensure treatment compliance. Since the patients' approach to therapy was completely different, the first being committed and engaged and the second quite reluctant, different strategies were used. For the reluctant patient, the main techniques were directed to: empathise with the distress, show concern for patient's discomfort, enquire about physical symptoms only if allowed, acknowledge the patient's views to the disease and agreeing upon trying CBT as an experiment, encouraging him ultimately to look also for alternative approaches while in therapy, keeping a keen eye on consolidating the therapeutic relationship, working with cognitive restructuring and imagery only after asking permission and informing the patient about the objectives of each session.

Therefore, I allowed both patients to tackle CBT in the manner each of them chose and also respected each rhythm of engagement in the therapeutic process. As known, CBT involves collaborative effort to find explanations of what their symptoms are. So I allowed patients to remain sceptical of alternative explanations until they have sound evidence to support them.

##### **5.2. CBT techniques applied to IBS patients**



CBT is mainly a skills-based therapy approach that focuses on modifying behaviours and altering dysfunctional thinking patterns to influence mood and physiological symptoms. The actual techniques and focus of this approach can vary greatly within a CBT framework; however, most CBT treatments for IBS include some combination of the techniques listed below.

#### *Psychoeducation*

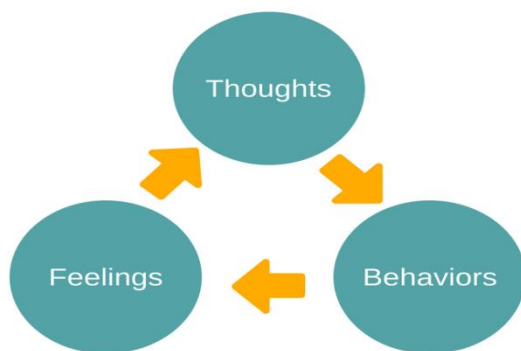
Psychoeducation is a key component of treatment and involves educating the patient on IBS, dispelling myths about IBS, explaining the brain–gut axis, the physiological stress response, and rationale for behavioural treatment. This education increases the patient’s likelihood of “buying in” to CBT treatment and can increase the patient’s insight into the possible role of stress or lifestyle factors on symptoms. Patients typically appreciate the education and find it helpful for understanding why standard medical treatments have been ineffective at adequately treating symptoms and why a behavioural treatment approach is warranted. For the two cases discussed here, whereas for the first patient (a freelancer) it seemed to be a key element for the success of the therapy, for the second patient, who was a doctor, it seemed to be less effective since he already knew everything about his illness. However, this part of his treatment focussed only on revealing to the patient the importance of following stress relief procedure and relaxation exercises.

#### *Relaxation strategies*

Relaxation strategies are typically introduced in one of the first few sessions and are aimed at teaching the patient skills to regulate autonomic arousal. The most common relaxation technique used is diaphragmatic breathing. Sufficient education is needed to explain the rationale for this technique (eg, diaphragmatic breathing engages the parasympathetic nervous system, which can downregulate pain thresholds and normalize gut motility), otherwise patients may be dismissive of breathing exercises being too simplistic. Relaxation training can also be used to increase patients’ awareness of physical tension that may be contributing to symptoms. The two patients were encouraged to practice these skills twice a week. Additional techniques such as progressive muscle relaxation were used for the first patient while for the second who seemed to be reluctant to this techniques guided imagery and hypnosis techniques were included.

#### *Cognitive restructuring*

Cognitive restructuring skills are necessary for addressing symptom-related anxiety and hypervigilance. Education is provided to increase patients’ awareness of the connection between distorted thinking patterns, stress, and digestive symptoms.



#### **The relationship between cognitions (thoughts), feelings, and behaviours.**

Starting from the relationship above, more specifically, the two patients understood how unhelpful thoughts negatively impact how we feel and these negative feelings can impact how we behave. By engaging in unhelpful or maladaptive behaviours, we reinforce our unhelpful thoughts. The therapist provides examples of symptom catastrophizing and explains how these cognitive appraisals contribute to stress and symptom exacerbation (e.g., fear of passing gas at a party can increase anxiety, which results in hyperarousal of the gut and increased likelihood of GI symptoms). Patients use worksheets to track automatic thoughts associated with symptoms and stressful events and the therapist highlights patterns of

catastrophizing and probability overestimation. Cognitive restructuring techniques are then used to assist patients in generating more accurate and balanced perspectives regarding stress and symptoms. Patients continue to practice these skills using a thought log until eventually the new cognitive styles become automatic and integrated into daily life.

Considering the fact that both patients were emotionally abused as children, the therapist focused on restructuring common thinking errors like “I have to work hard in order to allow myself to be happy or to relax” that led the two patients overwork to exhaustion; 4 to 5 sessions were dedicated to identifying, analysing, and changing the negative and sometimes distorted thoughts, feelings, and behaviours that were caused by, and enabled the symptoms of IBS; the patients were taught to discover and put into practice more effective ways of coping with IBS, with the eventual goal of reducing symptoms and consequently improving their lives.

#### *Problem-solving skills*

Problem-solving techniques or coping skills training is included to encourage more flexible coping and use of emotion-focused coping strategies. The two patients with IBS tended to rely more heavily on problem-focused coping regardless of the controllability of the stressor. The first was too focused on assuring the comfort of his son at home (having a health meal ever day, practicing the helicopter type parenting, whereas the second patient, who was a doctor, practiced the authoritative type of parenting, not being able to listen to his children’s stories or emotions and frequently appealing to physical punishment). The patients were helped to identify uncontrollable stressors and to practice implementing emotion-focused coping strategies (eg, acceptance, diaphragmatic breathing, cognitive restructuring, exercise, social support). IBS itself was used as an example of an uncontrollable stressor (eg, no known cure, unpredictable symptoms) and the use of emotion-focused strategies such as acceptance encouraged patients to shift from a “solution-focused” approach to a self-management approach for coping with this chronic condition.

#### *Exposure techniques*

Avoidance and “safety” behaviours are common among patients with IBS and can maintain symptom-related anxiety and contribute to symptom severity. For example, many patients avoid situations where they do not have easy access to a restroom, restrict their eating in attempt to control symptoms, or rely unnecessarily on medications when traveling. These behaviours can be addressed through the use of exposure therapy techniques or behavioural experiments. Exposure involves facing situations the patient is avoiding because of fear of symptoms (e.g, long road trip, eating at restaurants). This is typically done in a graduated fashion, often using an exposure hierarchy. Some interventions also incorporate interoceptive exposure (IE) exercises to reduce fear of GI sensations.

IE involved incorporating behaviours likely to trigger GI symptoms (eg, tightening the stomach, eating feared foods). As patients practiced these exposure exercises, avoidance behaviours decrease and appraisals of symptoms as being harmful or threatening were reduced, thus leading to increased self-efficacy. Behavioural experiments were also used for relieving anxiety feelings. The first patient was encouraged to send his son on a training practice with his team and the second was asked to award his sons a prize even if their grades weren’t as high as expected. The father was thus confronted with the fear of his feeling a not enough person, not worthy of being loved.

## **6. FINDINGS AND LIMITATIONS OF THE STUDY**

After treatment, the two patients still met the Rome diagnostic criteria for IBS. There was no significant reduction in bowel symptom frequency. There were, however, significant improvements in the distress and disability associated with bowel symptoms. Anxiety (first case) and aggressive behaviour (second case) were also significantly reduced. So the patients met their primary objectives but not necessarily the therapist’s, which was their second objective agreed as experimental with the therapist. They didn’t want to continue the therapy as they considered that the main reason they came to therapy has been fulfilled. The first patient was able to manage better her daily activities without feeling pressured to be successful in all of them, because she learned to delegate tasks when possible whereas the second was

pleased that he managed to master anger at work and at home, to have a better relationship with his sons and find meaningful ways to deal with difficult emotions.

We all agreed that the second objective should be treated experimentally and should not be considered as a major purpose of the therapy. However, at the therapist's proposal, they agreed that they had nothing to lose if they continue to put into practice techniques which may relieve them from the pain caused by IBS.

Cognitive-behaviour therapy reduced the distress and disability associated with IBS, improved the quality of life but not the frequency of bowel symptoms. This supports the proposed cognitive model for IBS, and cognitive-behaviour therapy appears to have its effect by altering the cognitive response to visceral. This therapy helps patients learn new ways to cope with and solve their problems as they gain a deeper understanding of their condition or circumstances. Patients will also learn to set realistic life goals and identify and change behaviours or thoughts that have negative effects on their lives.

One of the limitations in the present study was its limited number of participants which made the results difficult for generalization. Thus, further similar studies with bigger sample sizes are required. Another suggestion can be to compare this therapeutic method with other therapeutic methods such as individual cognitive behavioural therapy or other modalities and approaches of psychotherapy. Another limitation in this study was concerned with the lack of a control group, which calls for further research on the effectiveness of this method in the treatment of psychosomatic disorders based on the result of this study.

## 7. CONCLUSION

Cognitive Behaviour Therapy (CBT) is often the treatment of choice for a psychosomatic disorder. Physical symptoms are an intrinsic part of the model in a way that does not allow for a simplistic mind-body split. Health-related anxieties cause enormous distress and impairment — whether the anxieties are realistic, exaggerated, or totally unfounded. The cognitive behavioural style of collaborative empiricism fits with the medical/scientific model and implicitly encourages the patient to take responsibility for self-management. Patients with excessive anxiety show a typical pattern of dysfunctional thoughts. Patients who are excessively anxious about their health typically develop a range of dysfunctional coping behaviours, including avoidance, checking and reassurance seeking, which have the effect of maintaining their anxiety. Patients with functional somatic symptoms frequently resist psychological interventions. Considerable skill may be required to engage with such a client. CBT uses a wide range of techniques to address the 'dysfunctional thoughts' and 'safety behaviours' encountered in health-related anxiety.

Psychological interventions are well-established, effective treatments for IBS, and CBT in particular has been rigorously tested in clinical trials and consistently demonstrates significant and long-lasting symptom improvement.

Cognitive behavioural therapy showed generally consistent benefits in terms of anxiety and aggression symptoms of my patients, but inconsistent outcomes regarding IBD symptoms.

Despite the well-documented advantages of CBT for IBS, it has been poorly disseminated, at least in our country and few patients have access to this treatment. The primary barrier to dissemination is the limited number of therapists with adequate training in GI psychology to provide this evidence-based intervention. Future developments in the field need to focus on training opportunities to equip more therapists to competently provide CBT for this population. Further efforts to develop telemedicine platforms for delivering this intervention will also improve accessibility for patients.

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