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Citation for published version:

Sebastian Sanchez, B, Gil Roales-Nieto, J, Monteiro da Rocha Bravo Ferreira, N, Gil Luciano, B & Sebastian Doming, JJ 2017, 'New psychological therapies for Irritable Bowel Syndrome: Mindfulness and acceptance and commitment therapy (ACT)', *Spanish Journal of Gastroenterology*, vol. 109, no. 9, pp. 648-657. <https://doi.org/10.17235/reed.2017.4660/2016>

Digital Object Identifier (DOI):

[10.17235/reed.2017.4660/2016](https://doi.org/10.17235/reed.2017.4660/2016)

Link:

[Link to publication record in Edinburgh Research Explorer](#)

Document Version:

Peer reviewed version

Published In:

Spanish Journal of Gastroenterology

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New psychological therapies for Irritable Bowel Syndrome: Mindfulness and Acceptance and Commitment Therapy (ACT).

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ABSTRACT

The current goal of treatments in irritable bowel syndrome focus primarily on symptom management and attempts to improve quality of life. Several treatments are at the disposal of physicians, with lifestyle and dietary management, pharmacological treatments, and psychological interventions as the most used and recommended.

Psychological treatments have been proposed as viable alternatives or compliments to existing models of care. Most forms of psychological therapies studied have been shown to be helpful in reducing symptoms and in improving psychological components of anxiety/depression, and health-related quality of life. According to current NICE/NHS guidelines, physicians should consider referral for psychological treatment in patients who do not respond to pharmacotherapy for a period of 12 months and develop a continuing symptom profile (described as refractory irritable bowel syndrome). So far, Cognitive Behavioural Therapy has been the most well-studied and has been presented as the most promising treatment. However, some studies have challenged the effectiveness of Cognitive Behavioural Therapy for irritable bowel syndrome, with one study highlighting Cognitive Behavioural Therapy as not being more effective than an attention control placebo and another showing effects to wane at 6 months follow-up. A review of mind/body approaches to irritable bowel syndrome has therefore suggested that approaches that target mechanisms other than thought content change might be helpful, specifically mindfulness and acceptance based approaches. In this article, we intend to review these new psychological treatment approaches in an attempt to raise awareness of these alternative treatments to gastroenterologists that work with this clinical syndrome.

KEYWORDS:

Irritable Bowel Syndrome

Mental Disorders

Psychotherapy

Cognitive Therapy

Mindfulness

Acceptance and Commitment Therapy

ABBREVIATIONS:

IBS: Irritable Bowel Syndrome

CNS: Central Nervous System

ENS: Enteric Nervous System

CBT: Cognitive Behavioural Therapy

GSA: Gastrointestinal Specific Anxiety

DBT: Dialectical Behaviour Therapy

MBCT: Mindfulness Based Cognitive Therapy

BA: Behavioural Activation

FAP: Functional Analytic Psychotherapy

PI: Psychological Inflexibility

ACT: Acceptance and Commitment Therapy

MBSR: Mindfulness Based Stress Reduction

MBT: Mindfulness Based Treatments

IBSAAQ: Irritable Bowel Syndrome Acceptance and Action Questionnaire

1. INTRODUCTION

A recent systematic review and meta-analysis has demonstrated a global prevalence of IBS of 11%, a percentage that varies considerably in some instances, according to geographic region and diagnostic criteria used to define IBS (1). On the other hand, the percentage of patients seeking health care related to IBS reaches 12% in primary care practices and is by far the largest subgroup seen in gastroenterology clinics (2).

IBS has been defined according to the new Rome IV criteria (3) as recurrent abdominal pain associated with two or more of the following: related to defecation; associated with change in frequency of stool; associated with change in consistency of stool. Symptom onset should occur at least 6 months before the diagnosis, and symptoms should be present on average at least 1 day a week in the last 3 months.

The etiology and pathophysiology of IBS is unknown; several pathogenic factors responsible for the IBS have been proposed, such as genetic and environmental factors (4), abnormal gut motility (5), visceral hypersensitivity (6), post-infectious inflammatory mechanisms (7), psychological morbidity, physical, emotional and sexual abuse (8), bacterial overgrowth (9) and changes in intestinal microbiota (10), among others. However, none of them seems to clearly explain the mechanisms that trigger the syndrome.

Nowadays, a model taking into account the numerous physiological symptoms (e.g. altered motility, gut hypersensitivity) but also psychosocial factors and interactions between brain and gut seems to be shifting the understanding of IBS (11).

This biopsychosocial interpretation of IBS (11), heavily influenced by discoveries in the fields of psychosomatics and psychoneuroimmunology (12,13), is now recognized as one of the most complete and best fitting models for this illness

In the model we can see how changes in early life/premorbidity genetic and environmental (parenting, infection) factors might play a role in the development of both psychosocial (susceptibility to stress, psychological illness, psychological traits) and physiological (abnormal motility, visceral hypersensitivity) factors leading to the expression of IBS symptoms and coping behaviours. Also, interplay between psychosocial and physiological factors via the interactions between CNS and the ENS are highlighted as an influence in IBS expression (11). These biopsychosocial interactions are therefore thought to have an impact on patients' quality of life and the use they make of health care.

Historically, the absence of a structural or organic explanation for IBS and anecdotal observations of patients' behaviour has always been seen as support to the possible presence of psychological morbidity.

Early research described the aetiology of IBS to be linked with hypochondriasis or psychogenic traits (14) with some authors going as far as considering IBS to be part of a diagnosable psychiatric illness (15). This is not surprising as most studies show that between 54% and 94% of IBS patients meet criteria for at least 1 (Axis I) psychiatric disorder (16). IBS patients usually have different associated mental disorders with the most frequent being anxiety (69%) followed by affective disorders (38%) (17). Within the first, nervousness, rumination, panic attacks, posttraumatic stress, social phobia, somatization and eating disorder are included. Among the latter, sleep disorders, loss of appetite and exhaustion (18-20).

This is particularly relevant given the current guidelines for interventions in IBS. The current goal of treatments in IBS focus primarily on symptom management and attempts to improve quality of life (21). Therefore, after a positive diagnosis has been made, several treatments are at the disposal of physicians with lifestyle and dietary management,

pharmacological treatments, and psychological interventions as the most used and recommended (21, 22). Worthy of note is the practice guideline for the management of IBS-constipation (23), recently published in this journal.

Figure 1 presents an adapted flow chart of care resulting from a consensus between the recommendations of the British Society of Gastroenterology (22), the National Institute for Health and Clinical Excellence (NICE) (24) and the American College of Gastroenterology (25).

Although lifestyle and dietary management (e.g. exercise, fibre intake) have limited efficacy in IBS, in general, their safety and general health net benefits seem to justify their inclusion as a first line of management (22). Regarding conventional medical treatment (i.e. pharmacological), several studies and reviews have highlighted the limited efficacy of these approaches in providing adequate relief for IBS patients. Nevertheless, some drugs that are being used lately, such as linaclotide, rifaximine, melatonin or antidepressants, are producing good results (26). Therefore, approaches such as psychological treatments have been proposed as viable alternatives or compliments to existing models of care (27).

Most forms of psychological therapies studied have been shown to be helpful in reducing symptoms and in improving psychological components of anxiety/depression, and health-related quality of life (22, 27, 28). The success of psychological therapies for IBS global outcomes has seen it being implemented as a standard adjunctive treatment in the UK. According to current NICE/NHS (24) guidelines, physicians should consider referral for psychological treatment in patients who do not respond to pharmacotherapy for a period of 12 months and develop a continuing symptom profile (described as refractory IBS). So, those patients who do not get better with first line treatments can

benefit from psychological interventions, which may reduce pain and other symptoms and improve quality of life.

The most studied and used forms of psychological treatment for IBS have been relaxation training, brief psychodynamic psychotherapy, CBT, hypnotherapy and several forms of self-help. These forms of treatment have been used both in individual and group settings and are thought to be acceptable to patients, especially those who identify psychological factors as triggers for their IBS (29). Table 1 provides a simple overview of the most important psychological therapies in terms of understanding of (psycho)pathology, objectives in therapy, techniques used, and strengths/weaknesses, in an attempt to facilitate their comprehension beyond the psychological field.

So far, CBT has been the most well-studied and has been presented as the most promising treatment (26, 30). However, some studies have challenged the effectiveness of CBT for IBS with one study highlighting CBT as not being more effective than an attention control placebo (31) and another showing effects to wane at 6 months follow-up (32). Also, studies looking at active components of CBT, found that cognitive change (one of the key components of CBT) was not associated with any significant changes in outcomes (33). A review of mind/body approaches to IBS has therefore suggested that approaches that target mechanisms other than thought content change might be helpful, specifically mindfulness and acceptance based approaches (29).

In this article, we intend to review these new psychological treatment approaches in an attempt to raise awareness of these alternative treatments to gastroenterologists that work with this clinical syndrome.

Bibliographic search strategy

The biomedical literature search was performed in the PubMed database of the US National Library of Medicine (pubmed.gov). The MeSH (Medical Subjects Headings)

terms used to conduct the review and search of scientific evidence were: Irritable Bowel Syndrome [in the title] combined with Mindfulness [in the title] and with Acceptance and Commitment Therapy or Acceptance-Commitment, respectively, using the Boolean operator AND / OR. The results obtained were filtered with the following limits: Types of studies: Systematic Reviews, Meta-Analysis, Guideline, Practice Guideline, Consensus Development Conference (and Consensus Development Conference NIH), Randomized Controlled Trial, Controlled Clinical Trial and Clinical Trial; Age: adults (19 or more years); Language: English and / or Spanish; and with, at least, an Abstract. Database was searched for relevant studies published up until July 2016.

Initially, the title, abstract, and keywords of every record identified with the search strategy were screened. All potentially relevant articles were retained, and the full text of these studies obtained and evaluated in detail. Irrelevant articles were excluded by title or abstract. Foreign language papers were translated where necessary.

One author (BS) carried out data extraction which was then assessed by another author (NBF). Differences between reviewers were resolved by discussion until a consensus was reached.

2. THE PSYCHOLOGY OF IBS

2.1. The psychosocial profile of the IBS patient

Although physical symptoms are at the forefront of the IBS patient presentation, several studies have shown that a key factor in the maintenance and aggravation of IBS relates to psychosocial factors (cognitive and emotional) (34). Most patients are likely to report experiences such as worry about their symptoms, consequences and duration, anxiety, depression, stress, shame and anger (35,36). Within these psychosocial phenomena, one that seems to be more commonly reported is GSA, that has been defined as “the cognitive, affective and behavioural response stemming from fear of

gastrointestinal sensations, symptoms, and the context in which these visceral sensations and symptoms occur” (37). GSA is thought to contribute to IBS maintenance, by acting as an endogenous stressor that perpetuates alterations in autonomic and neuroendocrine responses even in the absence of an external stressor (38). The literature has shown that higher levels of GSA are related to higher symptom severity and lower quality of life in IBS (37, 39, 40).

Linked to GSA is the behaviour displayed by IBS patients, with avoidance being used as the main strategy to cope with the illness aversive experiences, even in the absence of symptoms (41). The patients tend to avoid situations or events such as certain foods or food related situations (e.g. eating out); social or work related situations (e.g. gatherings or meetings); leisure or travelling; personal relationships and intimate contact (42). Even though most patients believe this type of response as being essential for the management of their condition, they also recognise this to be the main cause behind their suffering (43).

The literature seems to support this with several studies showing that avoidant coping is associated with poorer quality of life, high levels of anxiety and depression (44, 45). Further to this, it has also been shown that recurrent avoidance as a coping strategy is only effective in the short term, having a rebound effect in the long term (for example, the more one tries to eliminate a thought, the more frequent it is) (46-48).

Strategies such as distraction are also not useful and in a similar way can increase pain awareness (49). Therefore, it is suggested that it's not the content or nature of the distressing experiences (physical or psychological) that is at the heart of suffering in IBS, but rather, how patients relate to these experiences and try to deal with them.

The alternative seems to be discriminating, observing and accepting private experiences without trying to alter in form but in function of the behaviour (50,51). From

this perspective, the goal of psychological intervention is then to help the patient develop and enhance skills that allow him/her to view and accept the private events related to his/her illness (thoughts and feelings of shame or guilt, fear, anxiety, stress, specific symptoms, etc.), without changing them, directing and maintaining behaviour toward his/her values and life goals.

2.2. Contextual Behavioural Models and IBS

As previously noted, some authors (29) have recommended that psychological treatments of IBS should not focus on changing the form and frequency of the symptoms or experiences related to IBS, but to change how patients deal with these experiences instead.

Treatment models developed from a Contextual Behavioural (or Third Wave) perspective seem to address this issue. These new psychological treatments have arisen as a result of significant shifts in philosophy of science (from mechanism to functional contextualism) (52) and the advance in the study of language and cognition as forms of behaviour (Relational Frame Theory, 53).

As a whole, these treatment models aim to: (a) build broad, flexible and effective behavioural repertoires in the patient, that are in line with their personal values; (b) by modifying the way the patient relates to their experiences (symptoms, thoughts, emotions and sensations) so that instead of focusing on eliminating them (53, 54), the patient can effect valued behaviour in their presence; and (c) instil moment-by-moment awareness so that the patient can notice the context and function of their experiences whilst not becoming entangled in them to the point they dictate their behaviour.

Third-wave approaches include a wide number of therapeutic models such as DBT (55); MBCT (56); BA (57) as well as FAP (58).

For the purposes of this article, we will be using ACT as a frame of reference, as it provides the most comprehensive account of how these interventions can be useful for IBS whilst also having the most robust evidence base (59).

ACT brings a new conceptualization of the suffering of patients with IBS in the following way: “*A proportion of IBS patients can be functionally characterized by the use of behaviours that seek to control, eliminate or alter the physical, emotional and cognitive experiences associated with IBS both in the presence or absence of symptoms. These behaviours seem to be motivated by an excessive fusion with a self conceptualization of being an IBS patient; fusion with unhelpful illness specific beliefs or cognitions; and by a dominance of feared future consequences or comparison with an idealized past. IBS patients also tend to choose to engage in these avoidant behaviours that provide short-term relief from their experiences over engaging in behaviours that are values-consistent and that might lead to better life satisfaction on the long-term.*” (60).

These are simultaneously occurring processes that contribute to this process, known as *psychological inflexibility* (PI), narrowing the patient’s repertoire and taking him to inaction, persistent avoidance and to an increasing limitation of life (61).

Acceptance and Commitment Therapy (pronounced as one word, “ACT”; 62) is a new behavioural therapeutic approach that uses processes of acceptance, defusion (see below), commitment and behaviour change to increase *psychological flexibility*, defined as “the ability to contact the present moment more fully as a conscious human being, and to either change or persist in behaviours when doing so serves valued ends” (63).

The use of *defusion* in ACT could be behaviourally described as a way to train discrimination between private events and the individual self, i.e. the individual is able to observe events such as thoughts, emotions, memories or physical sensations as part of a

repertoire of experiences that a human being is likely to experience, without becoming entangled in these experiences to a point that it exerts undue influence on their behaviour (64). In order to contact this type of discrimination on a moment-by-moment basis, ACT also attempts to reinforce a sense of being here and now in patients through mindfulness practices. In this defused stance, the patient is then more likely to be willing (or accepting) to hold distressing experiences, if it then allows him/her to move and behave coherently towards a valued end (e.g. family, friendships).

Some mindfulness practices are described and used in more depth in other third-wave therapies like MBSR program (65), one of the first procedures to integrate Eastern practices such as meditation and yoga to manage chronic pain and illness. Similarly, MBCT includes formal meditation and promotes a decentred view of thoughts, emotions and bodily sensations (66).

It should be noted, however, that is important to look at the function of MBSR and MBCT procedures. Although these techniques are aimed to train the person to become aware of the symptoms and not behave accordingly to them (that is, to change the function of the symptoms), they can be easily interpreted or used as a way to reduce or change the symptoms (and, in that case, behaving accordingly to them).

This model has received a lot of support and has proved to be very effective in health conditions (59) like diabetes (67), epilepsy (68), tinnitus (69) and chronic pain (70-72), being considered the possibility of its application to IBS (73,74).

3. EVIDENCE OF THE APPLICATION OF THIRD GENERATION THERAPIES TO IBS

Some encouraging results have been found in the application of third-wave psychological therapies with IBS.

The following is a narrative review of studies on the application of mindfulness techniques with CBT components, the application of mindfulness techniques alone and, finally, the application of ACT.

3.1 Mindfulness combined with CBT

One study (75) applied a CBT based protocol combining mindfulness techniques and exposure, aiming at reducing GSA. Inclusion criteria were female gender and age 18–65 years; patients were excluded if any somatic or psychiatric disorder deemed to interfere with treatment was present. Mindfulness component allows patients to be less likely to act on impulses, which, together with the exposure component (provocation of symptoms, prevention of response and exposure to situations that evoke symptoms) helps the patient accept his/her symptoms and aversive thoughts. This protocol led to a significant improvement in all symptoms (except for diarrhoea), and quality of life. The same effects were observed in an internet based version of the same protocol, and were maintained up to 6 months (76,77).

3.2 Mindfulness alone

The first non-controlled trial (78) was conducted in a Veteran population, with the following exclusion criteria: (i) psychotic disorder; (ii) mania or bipolar disorder; (iii) personality disorders; (iv) suicidal or homicidal ideation; (v) active substance abuse or dependence. Results showed that participation in MBSR group was associated with improvements in IBS-related quality of life and GSA. Changes in mindfulness skills were correlated with improvements in GSA among those meeting Rome IBS criteria, and there was a significant decrease in the percentage of subjects meeting Rome IBS criteria over 6-months follow-up.

A randomized controlled clinical trial of the application of mindfulness to IBS (79), was conducted in a female only population who have a medical diagnosis of IBS and

who also meet the Rome II criteria for IBS. Exclusion criteria included: 1) diagnosis of mental illness with psychotic features; 2) a history of an inpatient admission for psychiatric disorder within the past two years; 3) a history or current symptoms of inflammatory bowel disease or gastrointestinal malignancy; 4) active liver or pancreatic disease; 5) uncontrolled lactose intolerance; 6) celiac disease; 7) a history of abdominal trauma or surgery involving gastrointestinal resection; or 8) pregnancy or intention to become pregnant during the study. This protocol involved an 8-week mindfulness training that included techniques such as body scan, meditation, yoga and exercises that help the patient learn to observe thoughts and body sensations non-judgementally. This protocol had a clinically significant therapeutic effect on the severity of bowel symptoms (26.4% reduction compared to 6.2% in the control group) and improved the quality of life related to health, even at three months follow-up. In addition, the protocol had also an effect on psychological symptoms (anxiety, general severity, visceral anxiety), that was thought to have been mediated by an increase in mindfulness (79). The authors suggest that the program allows the patient to learn specific techniques with lasting effects, which can be performed in groups, being more cost-effective than other treatments such as CBT or hypnosis.

A second controlled study (80) was conducted with the following exclusion criteria: (i) diagnosis of a DSM-IV axis I mood, anxiety, or psychotic disorder; (ii) current use of antipsychotics; or (iii) past participation in an MBSR group. In order to ensure stability of medication over the course of the study, if there had been a change in medication, patients were asked to wait 3 months before being enrolled in the next cohort for randomization and not to change regimens or dosages for the duration of the study. Results showed a greater improvement of symptoms (from moderate to severe) in patients from a group of MBSR in comparison to a control group. However, a rebound effect of

symptoms in follow-up was observed, that is, the rate of improvement due to the program was not found to be necessarily maintained over time. In addition, the control group also improved over time -perhaps due to the beneficial effects of attention, self-monitoring and the anticipation of participation in the MBSR group- and no differences were observed between groups in terms of quality of life, alterations of mood and spirituality.

Finally, a recent study (81) comparing MBT with CBT has shown the former to be more effective in reducing IBS symptoms and to have a more lasting effect.

3.3. ACT

The application of ACT in IBS is still in an early stage, although significant steps have recently been made in that direction. For example, a pilot study (82) that analysed the effectiveness of ACT in adolescents with functional abdominal pain (some with IBS) shows that 12 to 14 sessions were effective in improving quality of life, levels of depression and anxiety and somatic complaints on the first month follow-up. Methodological shortcomings limit the conclusions, although this preliminary evidence suggests that ACT could be an effective approach to IBS.

The first study (74) looking at the application of ACT to IBS specifically was conducted with the following exclusion criteria: 1) they were pregnant or breastfeeding, 2) they reported any alarm symptoms suggestive of significant inflammatory or neoplastic gastrointestinal disorder (such as unexplained weight loss or unexplained rectal bleeding), and 3) they had a known cognitive impairment. A protocol that incorporated a one-day group workshop with a period of 2 months working with a self-help workbook (83) was used. Despite the limitations of this study (highly selected population, very specific format of intervention and absence of a formal control group condition -this last limitation compensated by using a within subject design), results showed that ACT was effective at reducing symptoms, GSA and the use of IBS related avoidance behaviours, whilst

improving IBS related and general quality of life. These results held up at 6-month follow-up with a trend for further gains (albeit not statistically significant).

Part of this study also involved the development of a measure of psychological flexibility specific to IBS, the IBSAAQ (84). The development of this measure allowed the authors to explore the role of psychological flexibility in the biopsychosocial model of IBS. The results indicated that psychological flexibility was a significant predictor of all IBS related outcomes beyond the effects of symptom severity or cognitive variables. Beyond these findings, the development of this measure also allowed the authors to explore the putative mechanism through which an ACT intervention works, i.e. that improvement in outcomes occurs through an increase in psychological flexibility. The authors reported that all gains in IBS related outcomes following the ACT intervention were fully mediated by increases in psychological flexibility, lending therefore an extra layer of validity to the intervention model.

4. FINAL CONSIDERATIONS

The research conducted to date on the implementation of third-generation therapies to IBS shows promising results. In two recent reviews (85, 86) MBT when combined with CBT appears to be effective in reducing symptoms and improving quality of life in IBS. Further to that improvement in symptoms seems to occur even accounting for the different IBS presentation types (e.g. constipation or diarrhoea predominant). However, both reviews indicated that the results should be interpreted with caution because most of the studies were of poor quality and had many methodological limitations (small and heterogeneous samples, dropouts, risk of bias, etc.).

On the other hand, ACT, by incorporating a more comprehensive model that is tied to a growth agenda (getting patients to enact their valued behaviours) rather than trying to address a deficit agenda (changing symptoms or thoughts), seems to be more effective.

Indeed, those patients who have trouble managing their bowel disorder and meet criteria for psychological comorbidity might be the most suitable ones for this kind of psychological therapy when these conditions get in the way of doing daily valued actions, and this results, progressively, in a restricted life. For example, the person's reports of avoidance of different situations (e.g. personal relationships and intimate contact; work related situations; leisure or travelling) might be a good indicative of this. Nevertheless, a patient's functional analysis of behaviour might be an effective general recommendation in order to explore if a pattern of PI is taking place. Extended in time, a pattern of PI might enable the person to act at the service of his or her valued directions, resulting in higher severity of symptoms (both physical and psychological) and less quality of life. ACT's core therapeutic strategies could help alter a PI pattern and start building a more flexible and effective way of living with the illness.

Although ACT could be conceived primarily as a form of individual therapy, it is extremely flexible and can be adapted to a group format, as well as be distance delivered, by telephone (87) or via Internet (75), which allows adjustment to the economic resources and time available in hospitals, centres of medical specialities and health centres. In addition, training in this therapeutic approach is not as long as in other intervention procedures (CBT, for example) and can be rolled out to different professionals (not just psychologists) (88).

Empirical evidence of ACT for IBS, albeit preliminary, shows that the results are maintained in the long-term (up to six-months follow-up) and that improvements occur through the hypothesized path of increase in psychological flexibility. These results are very encouraging and invite different professionals to continue working on this direction.

These findings add to the extensive literature that has shown the usefulness of ACT in improving different medical conditions, by either promoting healthy behaviours (diabetes, smoking cessation, weight maintenance) or by changing the relation patients have with their difficult illness experiences (chronic pain), resulting in significant improvements in quality of life (74).

Interesting pioneering work with patients with chronic pain (64) have shown the benefits of the joint work of different professionals -physiotherapists, occupational therapists, nurses, doctors and psychologists- in the patient's experience of the illness and the related quality of life.

Similarly, patients with other illnesses such as IBS (and other functional gastrointestinal disorders) may benefit from the interaction between gastroenterologists, nutritionists/dietitians, nurses and psychologists. Even though the purpose of pharmacological treatment is acting on the pathophysiological mechanism or, at least, on the symptoms, at the beginning it is not incompatible with psychological therapy, and IBS patients could benefit from the combination of both approaches. But the idea is that all professionals work together, in the same direction, to teach patients how to behave effectively in the presence of symptoms, feelings of shame or anxiety and, instead of trying to control them, learn to integrate them as part of their life. Thus, from a contextual perspective and with the empirical evidence supporting it, the goal will be to focus on training the person to observe and react to symptoms (stress, for example) in a way that is consistent to his/her objectives, goals and values. After all, IBS patients are people who, in addition to an illness, also have a life worth living, even if they have to carry that burden.

To sum up, although ACT was originally designed for psychological disorders, it has recently been applied to medical conditions with very good results. The present

review is the first compilation of the new evidence from the psychological perspective for non- psychologists (in this case, for gastroenterologists). Despite the limitations of this first attempts (few studies with few and highly selected populations and other methodological shortcomings), this new direction is very promising, and more research is needed, so that we can address this syndrome in a more precise and efficient way. ACT is not difficult to apply (brief protocols can be used, and better results are obtained if different professionals work together, in the same direction) nor to evaluate (there are general measures of PI, as well as specific measures for IBS), so we hope this review sheds light on this option and more practitioners start learning and researching on how to help patients with IBS to better live their life, with IBS being just a part of it.

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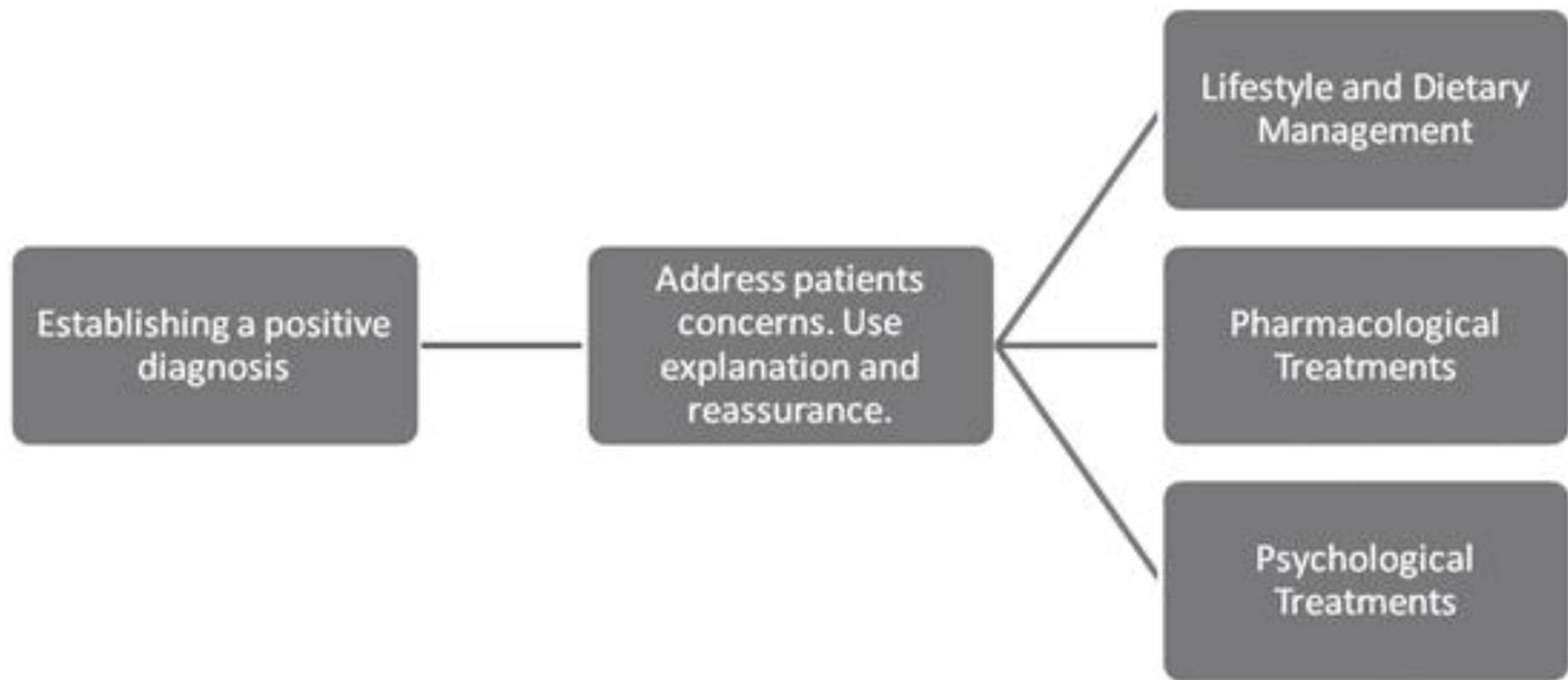
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	UNDERSTANDING OF (PSYCHO)PATHOLOGY	OBJECTIVES IN THERAPY	HOW? (TECHNIQUES)	STRENGTHS AND WEAKNESSES
PSYCHODYNAMIC PSYCHOTHERAPY	<ul style="list-style-type: none"> - Mental phenomena arise from conflicting forces → symptoms as an attempt to restore balance - Fixations / regressions in different stages of psycho-sexual development 	<ul style="list-style-type: none"> - Make conscious the unconscious (achieved by overcoming resistance to the memory of suppressed/repressed events) 	<ul style="list-style-type: none"> - Free association, interpretation of dreams, hypnosis, etc. 	<ul style="list-style-type: none"> (-) Unverifiable assertions; theories not scientifically proven (-) Very long therapy
COGNITIVE BEHAVIORAL THERAPY (CBT)	<ul style="list-style-type: none"> - Psychological disorders are due to a distorted automatic processing of reality (disorders differ in the irrational cognitive content) 	<ul style="list-style-type: none"> - Relief of symptomatology (reduction / elimination of symptoms) - To change feelings or behavior, thoughts and beliefs must be changed 	<ul style="list-style-type: none"> - Cognitive techniques aimed at changing thoughts and beliefs (eg questioning of evidence, direct disputation, thought stopping, etc.) - Behavioral techniques (eg in vivo exposure, relaxation training, etc.) 	<ul style="list-style-type: none"> (-) Lack of an unifying theoretical framework (+) Great expansion, much evidence (-) Unknown mechanism of action: effectiveness due to the behavioral component (-) Effects are not maintained in the long term
CONTEXTUAL THERAPIES (ACT, mindfulness)	<ul style="list-style-type: none"> - Psychological disorders emerge from a pattern of psychological inflexibility (in presence of certain symptoms, the behaviour that follows them results counterproductive in the long term) the process underlying the different psychological disorders 	<ul style="list-style-type: none"> - Altering the pattern of psychological inflexibility by changing the function of symptoms (changing the way the person reacts to thoughts and feelings), rather than focusing on changing and eliminating symptoms - Training a behavioural repertoire of <i>psychological flexibility</i> towards the person's valued-directions 	<ul style="list-style-type: none"> - Patient's functional analysis of behaviour and creative hopelessness (analysis of thoughts and emotions, reactions to them and the short- and long-term effects derived from these reactions) - Values clarification - Mindfulness and defusion techniques (metaphors and experiential exercises) 	<ul style="list-style-type: none"> (+) Well defined theory (Relational Frame Theory) and philosophy (Functional Contextualism) (+) Therapy closely linked to research (+) Effects are maintained in the long term (+) Applicable to many different psychological disorders and medical conditions

Table 1. Comparison between the main psychological therapies in terms of understanding of (psycho)pathology, objectives in therapy, techniques used, and strengths/weaknesses.