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Contrasting Psychotherapeutic Treatments in Inflammatory Bowel Disease: an Exploratory Review

Contrastando tratamientos psicoterapéuticos en la enfermedad inflamatoria intestinal: una revisión exploratoria

Carlos E. Zerpa
Universidad Simón Bolívar, Venezuela

Abstract

The aim of this study is to explain the effectiveness of psychotherapeutic treatments in patients with inflammatory bowel disease through an exploratory review of selected literature (2016-2022). Nineteen studies comprising interventions with cognitive behavioral psychotherapy, acceptance and commitment psychotherapy, and mindfulness were included, show data from $N = 2506$ people diagnosed with IBD, adult, adolescent and child participants, from different face-to-face and distance therapeutic programs. Results display a disparity of findings and are not definitive. The intervention that has the greatest verifiable therapeutic potential, given a better systematization of methodological procedures used, is cognitive behavioral psychotherapy. Future research on psychological interventions in IBD should focus on the use of trial of control and experimental groups, with random assignment of participants and compliance with parameters that guarantee comparison between groups and replicability of studies, including design of a more standardized version of intervention procedures.

Keywords: Inflammatory Bowel Disease; Cognitive-Behavior Psychotherapy; Mindfulness; Acceptance and commitment psychotherapy.

Carlos Enrique Zerpa, Universidad Simón Bolívar, Venezuela.

The correspondence regarding this article is addressed to Carlos E. Zerpa, Universidad Simón Bolívar, Venezuela. E-mail: czerpa@usb.ve

Abstract

El objetivo de este estudio fue explicar la efectividad de los tratamientos psicoterapéuticos en pacientes con enfermedad inflamatoria intestinal a través de una revisión exploratoria de la literatura seleccionada (2016-2022). Se incluyeron diecinueve (19) estudios que comprenden intervenciones con psicoterapia cognitivo conductual, psicoterapia de aceptación y compromiso y mindfulness, mostrando datos de $N = 2506$ personas diagnosticadas con EII, participantes adultos, adolescentes y niños, de diferentes programas terapéuticos presenciales y a distancia. Los resultados muestran una disparidad de hallazgos y no son definitivos. La intervención que tiene mayor potencial terapéutico comprobable, dada una mejor sistematización de los procedimientos metodológicos utilizados, es la psicoterapia cognitivo conductual. Futuras investigaciones sobre intervenciones psicológicas en EII deben enfocarse en el uso de grupos de prueba de control y experimentales, con asignación aleatoria de participantes y el cumplimiento de parámetros que garanticen la comparación entre grupos y la replicabilidad de los estudios, incluido el diseño de una versión más estandarizada de los procedimientos de intervención.

Palabras clave: enfermedad inflamatoria intestinal; psicoterapia cognitivo-conductual; atención plena; psicoterapia de aceptación y compromiso.

Inflammatory Bowel Disease (IBD) is a pathological condition that includes Crohn's disease (CD) and ulcerative colitis (UC); a chronical disease, it develops in people with genetic predisposition, in interrelation with environmental factors and the functioning of immune system (Meligrana et al., 2019). Clinical symptoms for this disease include weight loss, fever, rectal bleeding, abdominal pain, constipation, diarrhea, abdominal distention, and fatigue; its diagnosis is higher in younger populations, between 20 and 35 years-old (Leiva, 2019), although it has also been observed in pediatric consultation before the age of five in 4% of the total cases attending medical evaluation (Kelsen & Baldassano, 2008); This pathology has also been observed in adolescence (e.g., Zangara et al., 2021).

In Crohn's disease (CD), clinical signs are diverse and depend on extension, activity degree, location and course of the disease: patients report intermittent or perennial pain in the right iliac fossa in addition to abdominal pain and chronic diarrhea. Other symptoms such as general malaise, fever, anorexia, asthenia and weight loss are also frequent, although other criteria is taken into account for its diagnosis (radiological, endoscopic and pathological) (Ballester et al., 2018). In the case of ulcerative colitis (UC), it evolves clinically in an unpredictable manner with symptoms of abdominal pain, fecal urgency, hemorrhagic diarrhea, tenesmus (the need to evacuate even when the intestine is empty), fever (in severe cases) and external manifestations to the intestinal tract. Other evaluation criteria has also been useful for diagnosis, such as daily bowel frequency and rectal bleeding (Meyer & Treton, 2018). This disease has increased its prevalence rate in recent decades due, among other factors such as genetic and infectious, to an increase in systemic complexity of societies, that is, to existing conditions in complicated modern daily life. In this regard, it has been reported its incidence is higher in industrialized countries (Reyes et al., 2018), also in South America, Africa and Asia (Meligrana, 2019), observed since beginning of 20th century in societies with western life patterns (Kaplan & Ng, 2017).

IBD has drawn attention in the field of medicine, health psychology and health authorities due to an increase in prevalence after the 1950s. Indeed, Soriazu (2016) refers that the number of new cases

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of IBD has increased since 1950 by 6 times; incidence has gone from 4 cases per 100000 inhabitants in the period 1954-1993 to more than 25 cases today. This increase was more marked for ulcerative colitis, which has gone from 2.6 cases per 100000 inhabitants to more than 13 in recent years. Prevalence of IBD has been estimated at 0.3% worldwide, with a forecast increase of up to 0.9% by 2025 (Ng et al., 2018). IBD is associated with a large number of risk factors, for which its origin is considered multifactorial (Ananthakrishnan, 2015). Silva et al. (2019) state that genetic, immune system and environmental influences are found in its etiology and pathogenesis. However, lack of clarity around its causes allows it to be considered within the category of functional disorder and not only as a physiological alteration. For example, in accordance with González (2021), the World Health Organization (WHO) in its ICD-10 Manual (1992) includes CD and UC as types of somatoform vegetative dysfunction, as part of intestinal tract disorders (code F45.3).

Karantanos et al. (2010) report a diverse combination of persistent gastrointestinal symptoms occuring in them that are not always explained by structural or metabolic abnormalities. In this sense, IBD has been described as a disturbance of the gut-brain axis in which psychological factors, such as stressful life events and anxiety, can affect the onset and development of this condition (Moser et al., 2018). This suggests that development of this pathology may be influenced by biopsychosocial factors, specifically psychological, such as psychosocial stress, coping strategies, personality characteristics, psychopathological symptoms and social support (Tobón et al., 2007, p. 83) and etiology is still not completely clear: in IBD a biopsychosocial perspective in health can allow the understanding of factors contributing to expression and maintenance of symptoms (Casati & Toner, 2000). For this reason, it is important to understand emotional, cognitive, environmental and behavioral factors that participate in its appearance and modification (González, 2021; González & De Ascençao, 2005), all within a broad perspective of health concept.

Although some reports have questioned the possible role of psychosocial aspects in IBD due to contradictory results (e.g., Casellas et al., 2003; Mawdsley & Rampton, 2006), the literature also refers to studies showing their possible relationship with it (e.g., Casati & Toner, 2000; Maunder & Levenstein, 2008), that is, the treatment of this disease is not limited to medical pharmacology or surgery, but also extends to the psychological treatment given, which can play a very important role in the clinical improvement of patients. In this regard, Taft et al. (2017) state that approximately one third of patients with IBD experience anxiety and depression. Already Drossman et al. (1991) described four main areas of concern for patients: impact of disease, treatment, intimacy and stigma, topics that have been of interest for subsequent research on psychosocial problems of IBD (Casati et al., 2000). There are evidence-based psychological treatments for most IBD mental health problems and available psychotherapies.

Cognitive behavioral psychotherapy (CBT), originally developed to treat depression, shows consistent effectiveness when applied to a wide range of medical and psychiatric conditions, including IBD, and may be effective in mitigating a number of psychological problems related to digestive disorder (Taft et al., 2017). Being psychotherapy for IBD a newer area of research (Ballou & Keefer, 2017), based on most solid evidence, along with CBT, literature also reports effectiveness with use of mindfulness-based therapies and acceptance and commitment psychotherapy (ACT). However, although the thematic literature reports that not only physical and physiological factors but also

psychosocial ones can be considered in the etiology and development of IBD and, furthermore, that there is evidence of the effectiveness of psychological interventions in its treatment, it is also possible to state that these psychotherapeutic interventions seem ambiguous, contradictory or unclear, which is why research is necessary to establish conclusions regarding their use in patients suffering from this condition. In this sense, important questions arise regarding psychological treatments in IBD: what is the effectiveness of psychological psychotherapies in treatment of inflammatory bowel disease? What is the type of psychological intervention that most recent literature refers to as most effective in treatment of inflammatory bowel disease? Therefore, this research aims to explain effectiveness of psychotherapeutic psychological treatment in patients with inflammatory bowel disease through an exploratory review of literature included in the last seven years (2016-2022) of research on subject.

Method

The exploratory review (Silamani, 2015) was carried out following the PRISMA (Preferred Reporting Items for Systematic Reviews and Meta-Analyses) guidelines (Moher et al., 2009) as a structured literature search model. The bibliographic search process was carried out between February 12 and March 1, 2022, and is represented in Figure 1.

The electronic databases Ebsco, PubMed and Medline were used. For the thematic review, a double search (Spanish and English) was used through expressions that were applied for the exploration in the databases in the fields of keywords and retrieval of full-text documents: “Inflammatory bowel disease (and) psychological Therapy (and) “adults”; “Inflammatory bowel disease (and) psychological therapy (and) children”; “Inflammatory bowel disease (and) psychological therapy (and) adolescents”; “Inflammatory bowel disease (and) psychological treatment (and) adults”; “Inflammatory bowel disease (and) psychological treatment (and) children”. Eligibility criteria: A. Type of studies: 1) Scientific articles, 2) Arbitrated publications of scientific congresses; B. Nature of the studies: 3) Research that presented quantitative data analysis, 4) Research that showed results of qualitative data analysis, 5) Free and restricted access, downloadable from the electronic databases consulted, 6) Language: articles in Spanish and English, 7) Evidence-based primary studies. C. Type of participants: 8) adults, adolescents or children; D. Type of intervention: 9) Distance format; 10) Face-to-face format; 11) Mixed format (face-to-face / remote).

Exclusion criteria: 1) Articles not published in scientific journals, 2) Published meta-analyses, given that they include documentary review prior to 2016, 3) Articles older than 7 years (published prior to January 2016), 4) Articles with prospective protocols for future research.

A total of 297 studies were initially identified. In this phase, 185 duplicate documents and 68 documents without empirical or test-type data were discarded. Of the 44 documents of interest, the screening phase allowed us to discard another 20 documents that were returned by the databases but that did not directly refer to the topic. After applying the exclusion criteria, 24 articles were selected for their thematic relevance. Once the search was narrowed in the eligibility phase, the articles that could meet the objectives of this review and that met the exclusion criteria were identified. Next, a complete reading of the selection was carried out to analyze and extract the information contained, discarding five (5)

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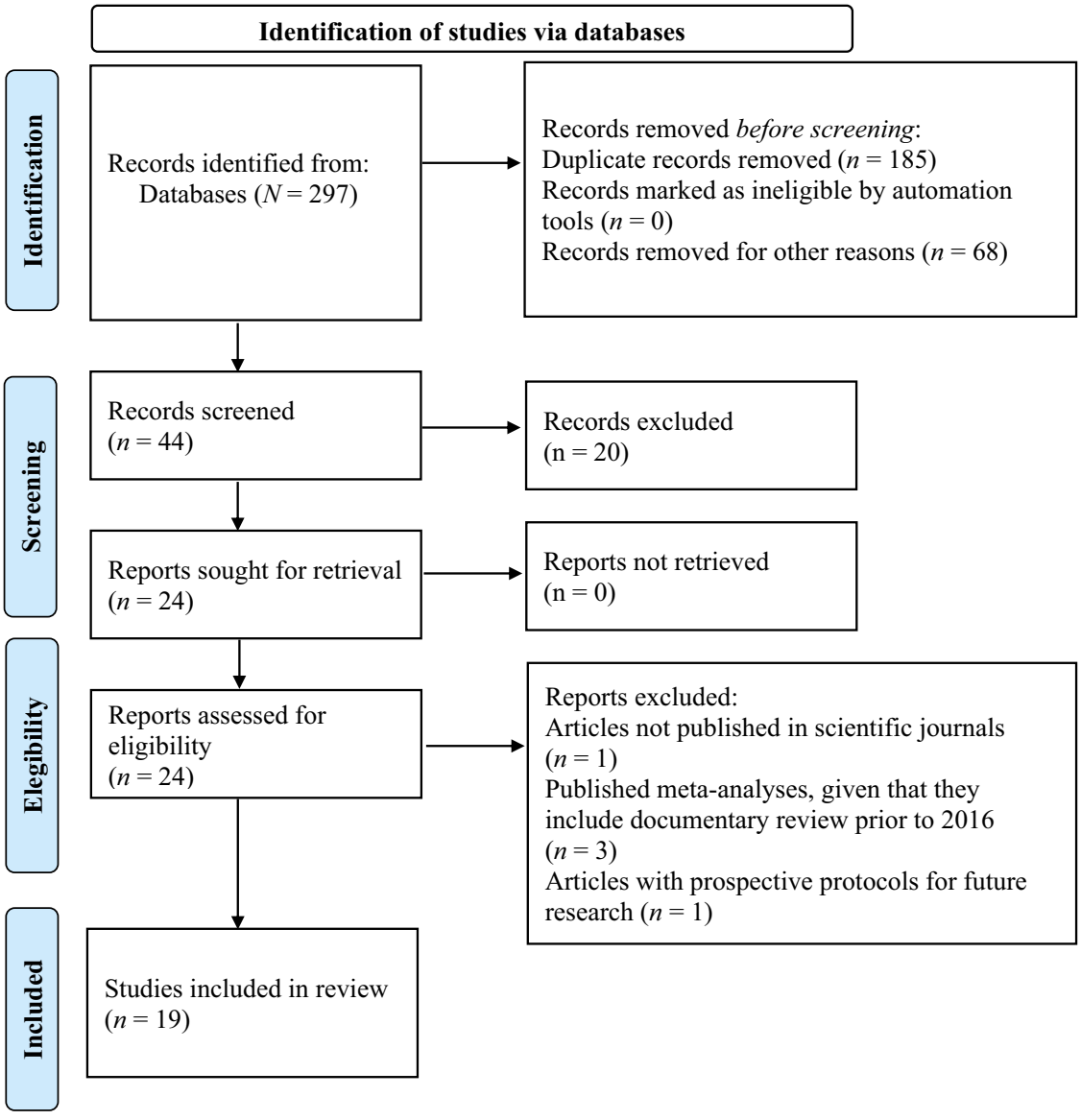
Figure 1
Literature review process based on PRISMA (Moher et al, 2009).



documents because they were not published in indexed scientific journals (1), they were meta-analyses that included previous reviews from the literature (3) or that referred to prospective research protocols (1). The final analysis (Table 1) was based on the 19 selected articles that met all criteria of the scoping review (see Table 1 here).

Results

Literature review initially yielded a total of $N = 297$ documents from consulted databases, of which 19 finally met the inclusion criteria (See table 1: Artom et al., 2019; Bernabeu et al., 2021; Carvalho et al., 2021; Cebolla et al., 2021; Drent et al., 2016; Ewais et al., 2020; González-Moret et al., 2020; Hou et al., 2017; Hunt et al., 2019; Keerthy et al, 2016; Kohut et al., 2019; Levy et al., 2016; Lyall et al., 2022; McCombie et al., 2016; Mikocka-Walus et al., 2017; Mulcahy et al., 2017; Neilson et al., 2016; Stapersma et al., 2020; and Wynne et al., 2019). A total of $N = 2506$ people diagnosed with IBD participated in the studies. Only one study (Keerthy et al, 2016) had a sample composed exclusively of children, one study only with women (Drent et al, 2016), two with adolescents/young adults (Ewais et al., 2020; Kohut et al., 2019) and another study used a mixed sample made up of parents and children (Levy et al., 2016). The rest ($N = 14$) were performed on adult samples.

Regarding the geographical origin of the investigations, reports were prepared by researchers from nine (9) countries; of them, five (5) are from North America (Canada and the United States), nine (9) were carried out in Europe (Spain, Holland, England, Ireland and Portugal) and another five (5) in Oceania (Australia and New Zealand). Methodologically, 13 investigations were carried out with a quantitative comparison design of two groups (experimental and control; pretest, post-test); only (2) had a single-group quantitative pretest-post-test comparison design (Drent et al., 2016; Hou et al., 2017); one investigation corresponded to a correlational study (Lyall et al., 2022); and three (3) reports had a mixed-type design (Cebolla et al., 2021; Ewais et al., 2020; Kohut et al., 2019).

Instruments used in the different investigations were really very diverse; they stand out those elaborated ad hoc to measure specific aspects of interest, for example: to know the number of hospitalizations due to disease, such as the one used by Levy et al. (2016); to establish perceived stress, such as the one used by Wynne et al. (2019); or a questionnaire to measure post-intervention satisfaction, such as the one used by Wynne et al. himself, passing through collections of qualitative information derived from focus groups (the case of the work by Kohut et al., 2019), to commonly used, objective, standardized, instruments used in many of the reports reviewed (the case of the Depression, Stress and Anxiety Scale DASS-21 used in the works of Hou et al., 2017; Lyall et al., 2022; Mulcahy et al., 2017 and Wynne et al., 2019; the Children's Depression Inventory (CDI) used by Keerthy et al. (2016), Kohut et al., 2019, Levy et al., 2016, and Stapersma et al., 2020, among other instruments. Other investigations used similar disease activity indexes in adult or pediatric versions, for example, the Crohn's Disease Activity Index (CDAI) (Bernabeu et al., 2021; Levy et al., 2016; Mikocka-Walus et al., 2017; Neilson et al., 2016; and Wynne et al., 2019) and ulcerative colitis activity, such as the Simple Clinical Colitis Activity Index (SCCAI) (Artom et al., 2019; Levy et al., 2016 and Mikocka-Walus et al., 2017). Likewise, at least two investigations used fecal-type biomarkers calprotectin and Concentration of C-reactive protein (González-Moret et al., 2020; Wynne et al., 2019), among other indexes.

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Around the general findings that are reported in the investigations, these can be grouped according to the three (3) psychotherapeutic approaches considered; In the first place, the use of cognitive-behavioral psychotherapy shows in seven (7) research reports changes or improvement in patients in psycho-socio-emotional dimensions or variables, such as mental health indicators, in regarding significant decreases in the frequency of hospitalizations (the case of Keerthy et al., 2016), fatigue (e.g., Artom et al., 2019), stress, anxiety or depression (e.g., Bernabeu et al., 2021; Hunt et al., 2019; Keerthy et al., 2016; McCombie et al., 2016; Stapersma et al., 2020) or quality of life (e.g., Levy et al., 2016), but not in indicators of the disease activity, as in cases of Bernabeu et al. (2021), Hunt et al. (2019) and Mikocka-Walus et al. (2017). Regarding mindfulness-based psychotherapeutic interventions, of the seven (7) studies included in the review, only reports by Drent et al. (2016) and Neilson et al. (2016) refer to improvements in mental health indicators (depression, anxiety or stress); in González-Moret et al. (2020) there is evidence of change in biomarkers of inflammation of C-reactive protein, fecal calprotectin and capillary cortisol, while in one of the studies no changes are reported for levels of disease activity or improvement in mental health variables (Kohut et al., 2019).

The four (4) studies that used acceptance and commitment psychotherapy, three (3) of them report changes in mental health dimensions such as stress levels (Mulcahy et al., 2017) stress and depression, but no anxiety (Wynne et al., 2019) and anxiety but not depression and stress (Hou et al., 2017), as well as no changes in clinical or biochemical indicators of disease (Mulcahy et al., 2017; Wynne et al., 2019). Particular aspects of each investigation are presented in Table 1.

Discussion

This research aims to explain the effectiveness of psychological treatments currently in use for inflammatory bowel disease based on the analysis of the thematic literature on IBD published in scientific journals during the 2016-2022 interval. In this sense, the literature review shows that along with the usual medical intervention that emphasizes the physiological and organic aspects psychological treatment has also taken part in the intervention procedures. Eight (8) papers reported CBT interventions; four (4) reports included CAT, and seven (7) studies dealt with mindfulness interventions.

The evidence of the effect of such psychological interventions, 19 studies reported in the interval 2016-2022 incorporated in this document, show diverse, inconclusive results that are consistent with what had been reported in literature reviews published in previous years. For example, Knowles et al. (2013) performed a meta-analysis of randomized controlled trials and found no evidence of the efficacy of these interventions in adults, noting that studies were grouped into very disparate interventions (eg, psychodynamic and cognitive-behavioral interventions) and further stated that interventions have, for the most part, multiple crossover theoretical approaches and that published reviews are heterogeneous in terms of both categorization of psychotherapeutic approaches and conclusions related to efficacy. In same sense, review shown in present study included psychological intervention procedures from three (3) different orientations (cognitive behavioral therapy, mindfulness and acceptance and commitment therapy), which are not only different in aspects of theory and meta-theory (for example, conception of man and science according to type of therapy administered) but also in technical design aspects of specific research methods (case studies, quasi-experimental research), of methodological approaches

used (quantitative, qualitative and mixed), and specific intervention procedures used (some better systematized than others), and even the administration space (face-to-face and virtual), all of which point to the need to design well-defined psychotherapeutic, theoretically solid interventions and to the design of investigations that guarantee greater methodological rigor to allow better comparisons between studies.

In general terms, the literature review carried out shows results that in some cases are effective for intervention in IBD, especially in terms of improvements in lifestyle of patients, as an index of improvement in their quality of life, but with diffuse results in relation to other mental health indicators, for example, in the case of anxiety and depression, psychological factors show improvements in some studies but not in others. Similarly, interventions focused on stress management showed only partial or rather moderate benefits in patients with IBD.

Designs of the interventions have generally emphasized informative and educational aspect regarding disease, together with aspects of psychotherapeutic interventions using specific techniques adjusted to each approach. In this regard, Barlow et al. (2010) already found evidence that information has a role in IBD but that it cannot be assumed that education leads to improvement in health and well-being, therefore, incorporation of informative-educational content of IBD in the design of interventions reported in some of the documents reviewed, could have little effectiveness in improving psychological symptoms, although self-management techniques for psychological aspects of disease may show results that tend to be more promising, an affirmation shared by Wenjing et al. (2015) who, based on a systematic review, find that self-care interventions have positive effects on health-related quality of life in patients with inflammatory bowel disease, delimiting that interventions that were administered remotely had better results than other types of interventions; on other hand, literature review shows that physiological and somatic symptoms of IBD seem to have no changes after administration of psychological procedures, while disease activity indices do not undergo modifications even in post-treatment measures test nor in successive measures sometime after interventions. This is similar in both cognitive behavioral psychotherapy interventions and mindfulness procedures or acceptance and commitment psychotherapy. Effect of psychological intervention on the evolution of chronic diseases is therefore controversial and specifically in IBD there are contradictory results.

Only the study reported by González-Moret et al (2020) shows a concrete effect of a psychological intervention on IBD biomarkers that suggest the appearance of improvement that indicate changes in the physiological condition of the pathology. But this result really points out the need to highlight the existence of important methodological biases in the studies reviewed, in which it is observed that equivalence between the members of the samples in important sociodemographic variables is not always guaranteed, with dispersions that can even be very large and show high heterogeneity.

Likewise, the measurement of variables of interest sometimes consists of adaptations or modifications that are not very clearly specified in the instruments used, as well as the fact that the programs used in psychological interventions of the same orientation are not completely comparable due to this in its design. They are considered very dissimilar themes or techniques, with hardly any roots that give them commonality. In any case, it can be stated that the studies reported that used cognitive-behavioral psychotherapy are those that possibly have the greatest guarantees of methodological rigor

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and, in addition, those that show the best evidence of success on changes in psychological variables; studies that used acceptance and commitment psychotherapy or were based on mindfulness, even when they report improvement results for some of the variables they considered, may lack systematization or clarity of the basic assumptions of the interventions practiced and, therefore, include contents that are difficult to operationalize or quantify.

Conclusions

Even observing difference in the number of studies included with respect to each psychological intervention and above all, putting the therapy that used mindfulness at a clear disadvantage insofar as only four (4) studies were included, compared to, for example, eight (8) that were included with a focus on CBT, at first it could be concluded in view of the disparity of findings analyzed, results of studies included in the review are not definitive and that possibly the type of intervention that has greatest verifiable therapeutic potential, given a better systematization of method procedures used, it is cognitive behavioral psychotherapy, although it would not be prudent to make a definitive formulation in this regard; however, review raises more questions regarding orientations considered (CBT, mindfulness or CAT): how to standardize intervention protocols to make them comparable in different studies? What is the research method, quantitative, qualitative or mixed, that best fits to verify effects of each type of therapy? Which biomarkers are really sensitive to therapeutic interventions to reflect changes in IBD activity? What instruments and variables can account for most effective type of psychological intervention in treatment of psychological and physiological factors associated with IBD?

An important consideration is that the review method used (exploratory review) could be improved if the range of publications considered were extended (10 years instead of seven, for example) and particularly if an evaluation of possible bias errors in the literature were included selection, as a properly systematic review requires.

These aspects could reasonably explain the limitations of the present investigation but would not in themselves explain the lack of a consistent pattern in the reported results. Future research on psychological interventions in IBD should therefore focus on use of experimental and control group testing procedures, with random assignment of participants and compliance with parameters that provide guarantees of contrast between groups and replicability of studies result, including design of a more standardized version of intervention procedures based on verifiable scientific assumptions, extension of period or interval of intervention or administration of therapeutic procedure and extension of measurement interval of post-test, use of valid and reliable measurement instruments, inclusion of biomarkers of course of disease as a criterion to evaluate success of intervention, and standardization of intervention protocols and administration modalities, in order to make possible change that is more objective. Despite this, review carried out also makes it clear that incorporation of psychological dimension in usual treatment of IBD entails great benefits in well-being and quality of life of patients with this disease, according to what current definition of OMS (2021) points out as components of people's health, and, therefore, it is a space of health psychology that is worth continuing to develop.

Authors Contribution

Carlos Zerpa carried out the entire procedure, including literature review, screening and selection of documents for the final sample, as well as their analysis, graphical organization, and overall manuscript organization.

References

Ananthakrishnan, A. N. (2015). Epydemiology and risk factors in IBD. N*ature Reviews Gastroenterology & Hepatology, 12*(4), 205-17. https://doi.org/10.1038/nrgastro.2015.34

Artom, M., Czuber-Dochan, W., Sturt, J., Proudfood, H., Roberts, D., & Norton, C. (2019). Cognitive behavioural therapy for the management of inflammatory bowel disease-fatigue: a feasibility randomised controlled trial. *Pilot and Feasibility Studies, 5*, 145, https://doi.org/10.1186/s40814-019-0538-y

Ballester, M. P., Boscá-Watts, M. M., & Mínguez, M. (2018). Enfermedad de Chron. *Medicina Clínica, 151*(1), 26-33. https://doi.org/10.1016/j.medcli.2017.10.036

Ballou, S., & Keefer, L. (2017). Psychological interventions for irritable bowel syndrome and inflammatory bowel disease. *Clinical and Translational Gastroenterology, 8*(1), e214. https://doi.org/10.1038/ctg.2016.69

Barlow, C., Cooke, D., Mulligan, K., Beck, E., & Newman, S. (2010). *A Critical Review of Self-Management and Educational Interventions in Inflammatory Bowel Disease. Gastroenterology Nursing, 33*(1), 11-18. https://doi.org/10.1097/SGA.0b013e3181ca03cc

Bernabeu, P., van-der Hofstadt, C., Rodríguez-Marín, J., Gutierrez, A., Alonso, M. R., Zapater, P., Jover, R., & Sempere, L. Effectiveness of a Multicomponent Group Psychological Intervention Program in Patients with Inflammatory Bowel Disease: A Randomized Trial. *International Journal of Environmental and Research Public Health, 18*(10). https://doi.org/10.3390/ijerph18105439

Carvalho, S. A., Skvarc, D., Barbosa, R., Tavares, T., Santos, D., & Trindade, I. A. (2021). A pilot randomized controlled trial of online acceptance and commitment therapy versus compassion-focused therapy for chronic illness. *Clinical Psychology and Psychoterapy*, 1-18. https://doi.org/10.1002/cpp.2643

Casati, J., & Toner, B. B. (2000). Psychosocial aspects of inflammatory bowel disease. *Biomedicine & Pharmacotherapy, 54*(7), 388-393. https://www.sciencedirect.com/science/article/abs/pii/S0753332201800068

Casati, J., Toner, B. B, de Rooy, E. C., Drossman, D. A., & Maunder, R. G. (2000). Concerns of patients with inflammatory bowel disease: a review of emerging themes. *Digestive Diseases and Sciences, 45*(1), 26-31. https://doi.org/10.1023/a:1005492806777

Cebolla, A., Navarrete, J., González-Moret, J., Cortés, X., Soria, J. M., Baño, R. M., & Lisón, J. F. (2021). Effectiveness of a Blended Internet-Based Mindfulness Intervention in Inflammatory Bowel Disease Patients: a Mixed-Methods Non-randomized Controlled Trial. *Mindfulness 12*, 2767–2780. https://doi.org/10.1007/s12671-021-01741-2

Drent, G., Kuiken, M., Mooibroek, J., Dijkstra, G., & Schroevers, M. (2016). The beneficial effects of mindfulness training on fatigue and psychosocial functioning in patients with inflammatory bowel disease and irritable bowel syndrome: a pilot study. *Journal of Crohn's and Colitis*, (suppl 1), S493–S505. https://doi.org/10.1093/ecco-jcc/jjw019.875

Drossman, D. A., Leserman, J., Li, Z. M., Mitchell, C. M., Zagami, E. A., & Patrick, D. L. (1991). *Psychosomatic Medicine, 53*(6), 701-712. https://doi.org/10.1097/00006842-199111000-00010

Ewais, T., Begun, J., Kenny, M., Headey, A., Tefay, M., & Kisely, S. (2020). Mindfulness-based cognitive therapy experiences in youth with inflammatory bowel disease and depression: findings from a mixed methods qualitative study. *BMJ Open 10*, e041140. https://doi.org/10.1136/bmjopen-2020-041140

González, M. (2021). El rol del psicogastroenterólogo en los equipos de salud. *Psicología y Salud, 31*(1), 123-129. https://doi.org/10.25009/pys.v31i1.2682

González, M. y De Ascençao, M. (2005). Síndrome de intestino irritable. Aspectos psicológicos. *Revista de la Facultad de Medicina de la Universidad Central de Venezuela, 28*(2), 139-145. http://ve.scielo.org/scielo.php?script=sci_arttext&pid=S0798-04692005000200007

González-Moret, R., Cebolla, A., Cortés, X. Baños, R. M., Navarrete, J., de la Rubia, J. E., Lisón, J. F., & Soria, J. M. (2020). The effect of a mindfulness-based therapy on different biomarkers among patients with inflammatory bowel disease: a randomized controlled trial. *Scientific Reports, 10*, (6071). https://doi.org/10.1038/s41598-020-63168-4

Hou, J. K., Vanga, R. R., Thakur, E., Gonzalez, I., Willis, D., & Dindo, L. (2017). One-Day Behavioral Intervention for Patients With Inflammatory Bowel Disease and Co-Occurring Psychological Distress. *Clinical Gastroenterology and Hepatology, 15(*10), 1633, 1634. https://doi.org/10.1016/j.cgh.2017.05.022

Hunt, M. G., Loftus, P., Accardo, M., Keenan, M., Cohen, L., & Osterman, M. T. (2019). Self-help Cognitive Behavioral Therapy Improves Health-Related Quality of Life for Inflammatory Bowel Disease Patients: A Randomized Controlled Effectiveness Trial. *Journal of Clinical Psychology in Medical Settings, 2*(46), https://doi.org/10.1007/s10880-019-09621-7

Kaplan, G. G., & Ng, S. C. (2017). Understanding and preventing the global increase of inflammatory bowel disease. *Gastroenterology, 152*(2), 313-321. https://doi.org/10.1053/j.gastro.2016.10.020

Karantanos, T., Markoutsaki, T., Gazouli, M., Anagnou, N.P, Karamanolis, D.G. (2010). Current insights in to the pathophysiology of irritable bowel syndrome. *Gut Pathogens, 2*(1), 1-8. https://doi.org/10.1186/1757-4749-2-3

Keerthy, D., Youk, A., Srinath, A., Malas, N., Bujoreanu, S., Bousvaros, A., Keljo, D., Demaso, D R., & Szigethy, E. M. (2016). Effect of Psychotherapy on Healthcare Utilization in Children with Inflammatory Bowel Disease and Depression. *Journal of Pediatric Gastroenterology and Nutrition, 63*(6), 658-664. https://doi.org/10.1097/MPG.0000000000001207

Kelsen, J., & Baldassano, R. N. (2008). Inflammatory bowel disease: the difference between children and adults. *Inflammatory Bowel Disease, 14* (Supplement 2), S9-S11. https://doi.org/10.1002/ibd.20560

Knowles, S. R., Monshat, K., & Castle, D. J. (2013). The Efficacy and Methodological Challenges of Psychotherapy for Adults with Inflammatory Bowel Disease: A Review. *Inflammatory Bowel Diseases, 19*(12), 2704–2715. https://doi.org/10.1097/MIB.0b013e318296ae5a

Kohut, S. A., Stinson, J., Jelen, A., & Ruskin, D. (2019). Feasibility and Acceptability of a Mindfulness-Based Group Intervention for Adolescents with Inflammatory Bowel Disease. *Journal of Clinical Psychology in Medical Settings, 27*, 68–78. https://doi.org/10.1007/s10880-019-09622-6

Leiva, M. J. (2019). Modelo de intervención psicológica para pacientes con enfermedad inflamatoria intestinal. *Revista Médica Clínica Las Condes, 30*(5), 365-371. https://www.sciencedirect.com/science/article/pii/S0716864019300781

Levy, R. L., van Tilburg, M. A., Langer, S. L., Romano, J. M., Walker, L. S., Mancl, L. A., Murphy, T. B., Claar, R. L., Feld, S. I., Christie, D. L., Abdullah, B., DuPen, M. S., Swanson, K. S., Baker, M. D., Stoner, S. A., & Whitehead, W. E. (2016). Effects of a Cognitive Behavioral Therapy Intervention Trial to Improve Disease Outcomes in Children with Inflammatory Bowel Disease. *Inflammatory Bowel Disease, 22*(9), 2134-2148. https://doi.org/10.1097/MIB.0000000000000881

López, J., Casellas, F., & Malagelada, J. (2003). Experiencia previa y calidad de vida en pacientes con enfermedad inflamatoria intestinal durante los brotes de actividad. *Revista Española de Enfermedades Digestivas, 95*(7), 471-475.

Lyall, K., Beswick, L., Evans, S., Cummins, R. A., & Mikocka-Walus, A. (2022). Mindfulness Practice Is Associated With Subjective Wellbeing Homeostasis Resilience in People With Crohn's Disease but Not Ulcerative Colitis. *Frontiers in psychiatry, 13*, 797701. https://doi.org/10.3389/fpsyt.2022.797701

Maunder, R., & Levenstein, S. (2008). The Role of stress in the development and clinical course of Inflammatory bowel disease: Epidemiological Evidence. *Current Molecular Medicine, 8*(4), 247-252. https://doi.org/10.2174/156652408784533832

Mawdsley, J., & Rampton, D. (2006). The role of psychological stress in inflammatory bowel disease. *Neuroimmunomodulation, 13*(5-6), 327-336. https://doi.org/10.1159/000104861

McCombie, A., Gearry, R., Andrews, J., Mulder, R., & Mikocka-Walus, A. (2016). Does Computerized Cognitive Behavioral Therapy Help People with Inflammatory Bowel Disease? A Randomized Controlled Trial. *Inflammatory Bowel Disease, 22*(1), 171-181. https://doi.org/10.1097/MIB.0000000000000567

Meligrana, N. E., Quera, R., Figueroa, C., Ibañez, P., Lubascher, J., Kronberg, U., Flores, L., & Simian, D., (2019). Factores ambientales en el desarrollo y evolución de la enfermedad inflamatoria intestinal. *Revista Médica de Chile, 147*(2), 212-220. https://scielo.conicyt.cl/pdf/rmc/v147n2/0717-6163-rmc-147-02-0212.pdf

Meyer, A., & Treton, X. (2018). Colitis ulcerosa. *EMC Tratado de Medicina, 22*(1), 1-8. https://doi.org/10.1016/S1636-5410(17)87870-3

Mikocka-Walus, A., Bampton, P., Hetzel, D., Hughes, P., Esterman, A., & Andrews, J. M. (2017). Cognitive-Behavioural Therapy for Inflammatory Bowel Disease: 24-Month Data from a Randomised Controlled Trial. *International Journal of Behavioral Medicine, 24*, 127-135. https://doi.org/10.1007/s12529-016-9580-9

Moher, D., Liberati, A., Tetzlaff, J., y Altman, D. G. (2009). The PRISMA Group (2009). Preferred Reporting Items for Systematic Reviews and Meta-Analyses: The PRISMA Statement. *PLoS Medicine 6*(7), e1000097. https://doi.org/10.1371/journal.pmed.1000097

Moser, G., Fournier, C., & Peter, J. (2018). Intestinal microbiome-gut-brain axis and irritable bowel syndrome. Intestinale Mikrobiom-Darm-Hirn-Achse und Reizdarmsyndrom. *Wiener medizinische Wochenschrift (1946), 168*(3-4), 62–66. https://doi.org/10.1007/s10354-017-0592-0

Mulcahy, H., Wynne, B., McHugh, L., Rowan, C., Byrne, K., Keegan, D., Hartery, K., & Dooley, B. (2017). A randomised controlled trial of acceptance and commitment therapy for the treatment of stress in inflammatory bowel disease. *Journal of Crohn's and Colitis, 11* (suppl 1), S266. https://doi.org/10.1093/ecco-jcc/jjx002.495

Neilson, K., Ftanou, M., Monshat, K., Salzberg, M., Bell, S., Kamm, M. A., Connell, W., Knowles, S. R., Sevar, K., Mancuso, S. G., & Castle, D. (2016). A Controlled Study of a Group Mindfulness Intervention for Individuals Living With Inflammatory Bowel Disease. *Inflammatory Bowel Disease, 22*(3), 694-701. https://doi.org/10.1097/MIB.0000000000000629

Ng, S. C., Shi, H. Y., Hamidi, N., Underwood, F. E., Tang, W., Benchimol, E. I., Panaccione, R., Ghosh, S., Wu, J. C., Chan, F. K., Sung, J. J., & Kaplan, G. G. (2018). Worldwide incidence and prevalence of inflammatory bowel disease in the 21st century: a systematic review of population-based studies. *Lancet, 39*(10114), 2769-2778. https://doi.org/10.1016/S0140-6736(17)32448-0

OMS (2021) *Constitución de la organización mundial de la salud*. https://www.who.int/governance/eb/who_constitution_sp.pdf

Reyes, G. A., Gil, F. L., Carvajal, G. D., Sánchez, C. B., Aponte, D. M., González, C. A., Gamba, J. I., Preciado, J. A., Marulanda, J. C., & Sabbagh, L. C. (2018). Enfermedad inflamatoria intestinal: características de fenotipo y tratamiento en un hospital universitario de Bogotá, Colombia. *Revista Colombiana de Gastroenterología, 33*(2), 117-126. https://revistagastrocol.com/index.php/rcg/article/view/196

Silamani J. A. G. (2015). *Utilidad y tipos de revisión de la literatura*. http://dx.doi.org/10.4321/S1988-348X2015000200002

Silva, F., Gatica, T., & Pavez, C. (2019). Etiología y fisiopatología de enfermedad inflamatoria intestinal. *Revista Médica Las Condes, 30*(4), 262-272. https://doi.org/10.1016/j.rmclc.2019.06.004

Soriazu, D. (2016). Enfermedades intestinales, un reto del siglo XXI. El diario Vasco, Lunes 20 de junio. https://www.diariovasco.com/sociedad/201606/20/enfermedades-intestinales-problema-siglo-201606200638

Stapersma, L., van den Brink, G., van der Ende, J., Szigethy, E. M., Groeneweg, M., de Bruijne, F. H., Hillegers, M. H., Escher, J. C., & Utens, E. M. (2020). Psychological Outcomes of a Cognitive Behavioral Therapy for Youth with Inflammatory Bowel Disease: Results of the HAPPY-IBD Randomized Controlled Trial at 6- and 12-Month Follow-Up. *Journal of Clinical Psychology in Medical Settings, 27*, 490–506. https://doi.org/10.1007/s10880-019-09649-9

Taft, T. H., Ballou, S., Bedell, A., & Lincenberg, D. (2017). Psychological considerations and Interventions in inflammatory bowel disease patient care. *Gastroenterolgy Clinics of North America, 46*(4), 847-858. https://doi.org/10.1016/j.gtc.2017.08.007

Tobón, S., Vinaccia, S., Quiceno, J. M., Sandín, B., & Nuñez, A. C. (2007). Aspectos psicopatológicos en la enfermedad de Chron y en la colitis ulcerosa. *Avances en Psicología Latinoamericana, 27*(2), 83-97. https://revistas.urosario.edu.co/index.php/apl/article/view/1207

Wenjing, T., Guihua, X. Shizheng, D. (2015). Structure and content components of self-management interventions that improve health-related quality of life in people with inflammatory bowel disease: a systematic review, meta-analysis and meta-regression. *Journal of Clinical Nursing, 24*(19-20), 2695-2709. https://doi.org/10.1111/jocn.12851

Wynne, B., McHugh, L., Gao,, W., Keegan, D., Byrne,, K., Rowan, C., Hartery,, K., Kirschbaum, C., Doherty, G., Cullen, G., Dooley, B., & Mulcahy, H. E. (2019). Acceptance and Commitment Therapy Reduces Psychological Stress in Patients With Inflammatory Bowel Diseases. *Gastroenterology, 156*(4), 935-945. https://doi.org/10.1053/j.gastro.2018.11.030

Zangara, M., Bhesania, N., Liu, W., Cresci, G., Kurowski, J., & McDonald, C. (2021). Impact of diet on inflammatory bowel disease symtoms: an adolescent viewpoint. *Inflammatory Bowel Diseases, 27* (Supplement 1), S58–S59. https://doi.org/10.1093/ibd/izaa347.140

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About author:

Carlos Enrique Zerpa holds a Ph.D. in Psychology, a Ph.D. in Education Sciences, and a Master's degree in Cognitive Psychology. He graduated from the School of Psychology at the Andrés Bello Catholic University in Caracas and has worked as a university professor and researcher at various universities in Venezuela (National Open University, Central University of Venezuela, Andrés Bello Catholic University, and Simón Bolívar University) for at least 27 years. His areas of interest include health psychology, educational psychology, research and development project management, and instructional planning. Since April 2024, he has retired from public service in Venezuela after completing his tenure, and currently works as a consultant in his areas of expertise.

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