Intuition: The BYU Undergraduate Journal of Psychology

Volume 15 | Issue 2 Article 10

2020

The Need for a More Holistic Approach for the Treatment of Irritable Bowel Syndrome

Haylee E. Dahlin

Follow this and additional works at: https://scholarsarchive.byu.edu/intuition

Part of the Psychology Commons

Recommended Citation

Dahlin, Haylee E. (2020) "The Need for a More Holistic Approach for the Treatment of Irritable Bowel Syndrome," *Intuition: The BYU Undergraduate Journal of Psychology*: Vol. 15 : Iss. 2 , Article 10.
Available at: https://scholarsarchive.byu.edu/intuition/vol15/iss2/10

This Article is brought to you for free and open access by the Journals at BYU ScholarsArchive. It has been accepted for inclusion in Intuition: The BYU Undergraduate Journal of Psychology by an authorized editor of BYU ScholarsArchive. For more information, please contact ellen_amatangelo@byu.edu.

The Need for a More Holistic Approach for the Treatment of Irritable Bowel Syndrome

Haylee E. Dahlin
Brigham Young University

Abstract

Irritable bowel syndrome (IBS) has been shown to be associated with psychological symptoms as well as physical. Despite this correlation, physicians are more likely to focus on and provide treatments primarily for the physical aspects of IBS, which may result in a less-than-ideal treatment of the disorder. This literature review examines many IBS-related studies which show the existence of psychological components of IBS and the efficacy of treatment methods based in psychology. The conclusion of this research is that the current medical treatments of IBS are insufficient, and patients would likely see more improvements if physicians were to create a more holistic, individualized treatment plan for each patient by assessing for and treating the psychological aspects of IBS in addition to the physical aspects.
Keywords: irritable bowel syndrome, individualized treatment, antidepressants, psychotherapy, holistic treatment

The Need for a More Holistic Approach for the Treatment of Irritable Bowel Syndrome

The Need for a More Holistic Approach for the Treatment of Irritable Bowel Syndrome

Irritable bowel syndrome (IBS) is a gastrointestinal disorder characterized by periodic abdominal pain and abnormal bowel movements which affects approximately 10–20% of adults in Western countries (Lovell & Ford, 2012). Although the disorder is not life-threatening, it can have debilitating, if not devastating, effects on the social, professional, and personal lives of those who have it. Not only does IBS have encumbering physical symptoms and social effects, but research has found psychological connections as well (Tosic-Golubovic et al., 2010). IBS is commonly comorbid with psychological disorders such as depression and anxiety. Several studies have demonstrated the efficacy of a holistic approach, incorporating psychological treatment as well as physical treatment, in improving symptoms of IBS (Craske et al., 2011; Ljótsson et al., 2014; Muscatello et al., 2010).

There is a need for improvement in the way people with IBS are diagnosed and treated due to the evidence that physicians currently focus primarily on the physical aspects of IBS, often leaving patients dissatisfied (Harvey et al., 2018; Shivaji & Ford, 2015). Despite the benefits of holistic treatment methods, evidence suggests that clinicians are more likely to use or recommend traditional medicinal treatments, such as soluble fiber and antispasmodics, rather than therapy or medication focused on the mental aspects of IBS (Shivaji & Ford, 2015). Additionally, many physicians view IBS simply as a diagnosis of exclusion; this means that, rather than using the gastroenterologist-developed diagnostic criteria to specifically address IBS, many physicians provide an IBS diagnosis only after ruling out other gastrointestinal issues. Moreover, many who suffer from IBS have expressed dissatisfaction in the process of seeking treatment, specifically in a lack of individualized care shown by clinicians (Harvey et al., 2018). The improvement of individual IBS patients may depend on the improvement of the individualization of the IBS treatment process.

More personalized treatment would likely be more effective in treating IBS, thus providing those who suffer from this disorder with more relief, freedom, and a better life overall. Although most of the symptoms are physical, it would be beneficial if clinicians were to go beyond diagnosing and treating only the physical aspects of IBS by assessing and presenting a holistic treatment plan tailored to the patient's psychological needs as well. This kind of individualized diagnosis and treatment is warranted for the following reasons: assessing for psychological

issues may provide good indication for which treatments will be most beneficial for the individual, psychopharmacological treatments have shown great potential for alleviating IBS symptoms, and psychotherapeutic treatments can also have a significant impact on both the physical and psychological aspects of IBS.

Methods

To find the articles included in this review, I searched the APA PsycInfo database for the terms "irritable bowel syndrome or IBS" AND "mental illness" AND "treatment." I narrowed the search to peer reviewed articles from the years 2000–2020, which yielded 21 results. I also conducted a similar search with only the terms "IBS" AND "mental illness," and then I searched for "IBS" AND "treatment." After reading through the abstracts of these articles, I selected the ones that were most relevant to the subject I was studying, which is the interaction between mental illness and irritable bowel syndrome and the treatment methods which take this interaction into account. Additionally, I found other sources referenced within some of those articles which were also relevant to this review and have thus included them.

The Value of Psychological Assessments in Diagnosing and Treating IBS

To ensure that each patient receives an individualized, holistic, and therefore more effective treatment plan, psychological assessments should be administered to patients to evaluate their levels of predicting psychological factors as part of the diagnostic process for IBS. Between all the different kinds of therapies, medications, and other treatment options for patients with IBS, prescribing an effective and feasible treatment plan is a complicated task for clinicians (Shivaji & Ford, 2015). Studies have shown that the treatment option that will work best for a certain person can often be predicted by psychological factors such as anxiety, depression, trauma, alexithymia, and somatization (Creed et al., 2008; Farnam et al., 2014; Mohamadi et al., 2019; Porcelli et al., 2017). To measure these factors, simple (but reliable) questionnaires could be given to patients such as the Visceral Sensitivity Index, Toronto Alexithymia Scale, Hospital Anxiety and Depression Scale, Recent Physical Symptoms Questionnaire, and the Comorbid Medical Conditions Questionnaire (Creed et al., 2008; MacLean et al., 2012; Muscatello

et al., 2010; Porcelli et al., 2017). Paired with follow-up questions or interviews, these tests would give physicians a more in-depth analysis of the psychological components of the disorder rather than the physical components alone, allowing them to identify the best treatment option for that specific patient.

Testing for Comorbid Mental Illnesses

Several studies done in recent years have shown patterns of comorbidity with IBS and psychological disorders; that knowledge of an individual's comorbidities can lead to the implementation of effective treatment options (Cho et al., 2011; Mohamadi et al., 2019; Muscatello et al., 2010). The psychological aspects of IBS appear to be bidirectional, so whether IBS symptoms cause or are caused by psychological issues like anxiety and depression, clinicians' knowledge of and treatment tailored to these specific characteristics in individuals will lead to better quality treatment (Muscatello et al., 2010). A study conducted by Tosic-Golubovic et al. (2010) illustrated this by comparing the anxiety and depression levels of IBS patients to both people experiencing a depressive episode and healthy individuals. The levels of depression and anxiety in IBS patients were significantly closer to the participants experiencing a depressive episode than to those considered healthy. While not every person with IBS has high levels of depression or anxiety, if physicians are knowledgeable about these issues, they can help address them with the treatment that best fits each patient's individual experience. For example, in a study by Mohamadi et al. (2019), positive psychotherapy was shown to improve levels of overall quality of life, while mindfulness-based cognitive therapy (MBCT) was shown to lower levels of perceived stress than the other therapies tested. By understanding this research and assessing an individual patient's needs, a physician can prescribe more effective treatments catered to the individual—for example, prescribing MBCT to patients with higher stress levels.

In addition to anxiety and depression, trauma is highly associated with IBS and should therefore be assessed for and treated in IBS patients. One study found that PTSD and IBS had a 23% comorbidity rate among Iraq and Afghanistan veterans (Maguen et al., 2014). Mindfulness-based stress reduction has shown potential as an efficacious treatment for veterans with IBS and PTSD (Harding et al., 2018). In addition to being prevalent among veterans, IBS is also common among victims of abuse (Creed et al., 2005). In a study of patients with severe

The Need for a More Holistic Approach for the Treatment of Irritable Bowel Syndrome

IBS, Creed et al. found that victims of sexual abuse experienced significant improvement in IBS symptoms after undergoing psychological treatment (either psychotherapy or antidepressants), while those who received only the usual treatment experienced little to no change. By screening IBS patients for PTSD symptoms and signs of abuse, clinicians can recommend effective treatments, especially psychological treatments like those previously discussed.

Testing for Alexithymia

Alexithymia, the inability to discern or express one's own emotions, is prevalent among the IBS population and can exacerbate IBS symptoms, which makes assessing and being aware of the condition important for physicians (Farnam et al., 2014). In fact, Farnam et al. reported that patients with IBS had higher scores in all three measured areas of alexithymia compared to the scores of a normal population when their participants completed the Toronto Alexithymia Scale. These findings are consistent with the findings of Porcelli et al. (2017), which also show that alexithymia is a significant predictor of IBS symptom severity. More than just finding the rates of alexithymia among IBS patients, Farnam et al. (2014) also found an effective treatment method for this population: emotional awareness training. Simply by attending two 30-minute group training sessions and recording their emotions every day, IBS patients with high levels of alexithymia experienced noteworthy improvement over the 12 weeks of the study; of the group who received only medical treatment, 36% reported a significant decrease in pain, while 54% of those who received emotional awareness training experienced significantly less pain. Similar percentages to these were reported for the decrease in frequency of pain as well. These findings provide extremely valuable insights for physicians treating IBS: it is important to assess for alexithymia, and if assessments show that a patient has high alexithymia levels, emotional awareness training may become a critical component of the treatment plan for that patient.

Testing for Somatization

Another factor that should be measured in IBS patients along with psychological comorbidities and alexithymia is somatization, which is the recurrent production of multiple bodily symptoms without a perceptible physical

source (MacLean et al., 2012). Van Tilburg et al. (2013) found somatization to be one of the highest predictors of IBS severity in a study measuring the effects of psychological factors on IBS. In 2008, Creed et al. conducted a study to examine how somatization effects the efficacy of treatment for patients with severe IBS. The study revealed that not only did patients with higher somatization levels have more severe IBS, but they also responded much more positively to psychological treatment than to the usual treatment and experienced more dramatic improvement than the participants with lower somatization levels. This study demonstrates the practicality of assessing somatization levels in addition to levels of anxiety, depression, trauma, and alexithymia in IBS patients and prescribing a treatment plan that goes beyond usual medical care to include psychopharmacological and/or psychotherapeutic treatments.

The Effects of Psychopharmacological Treatments on Physical and Psychological Aspects of IBS

Psychological medication is one promising method of treatment for patients with IBS. Despite the common comorbidity of IBS and psychological disorders such as depression and anxiety, few studies have been done to examine the effects of psychopharmacological treatments such as selective serotonin reuptake inhibitors (SSRI) and serotonin-norepinephrine reuptake inhibitors (SNRI) on IBS. Those that have tested the impact of these drugs on IBS patients have found positive results on both the physical and mental symptoms of IBS, indicating the drugs' potential value and the pressing need for more testing on the subject (Kaplan et al., 2014; Kuiken et al., 2003; Vahedi et al., 2005). As more studies show the benefits of psychopharmacological treatments, clinicians can prescribe these medications as part of an individualized treatment plan for their patients.

One SSRI that has shown potential in the treatment of IBS is paroxetine. In a study conducted in 2002, Masand et al. compared the effects of paroxetine on the IBS symptoms of 10 IBS patients with a comorbid anxiety disorder and 10 IBS patients without an anxiety comorbidity. Following 12 weeks of the SSRI treatment, most participants in both groups reported improvement in severity and frequency of pain, constipation, and diarrhea. Although there was greater improvement reported in the anxiety group, the difference was not enough to be considered statistically significant, meaning that both those with and those

The Need for a More Holistic Approach for the Treatment of Irritable Bowel Syndrome

without an anxiety disorder benefited from the treatment almost equally. While this study indicates promising benefits of paroxetine in treating IBS symptoms, some limitations are the small sample size and the lack of a placebo group. However, a different study conducted by Masand et al. in 2009 did compare the effects of paroxetine and a placebo on patients with IBS with a much larger sample size of 72 participants (36 in each group). Although this study did not find a statistically significant difference in the pain levels reported by both groups, it did find significantly more improvement in the paroxetine group in other measured areas such as Clinical Global Impression-Improvement and Clinical Global Impression-Severity. While additional research should be done, the results of these studies do indicate that paroxetine is a treatment option worth considering for patients with IBS.

SNRIs also have great potential as a medical intervention for IBS, particularly the drug duloxetine. Kaplan et al. (2014) conducted a study to examine the effects of duloxetine on the symptoms of IBS and generalized anxiety disorder in patients who experience both conditions comorbidly. After receiving 12 weeks of treatment, nine of the 11 participants who completed the study showed significant improvements in areas such as anxiety levels, IBS symptom severity, and overall quality of life as it relates to IBS. A similar study was conducted by Brennan et al. in 2009 in which duloxetine was given to eight IBS patients for 12 weeks. Despite the fact that none of the participants had major depression, the antidepressant proved to be effective in lowering levels of anxiety, pain, and severity of illness while increasing quality of life in participants. Despite small sample sizes and other limitations which indicate the need for more research, these studies demonstrate the potential benefits of medication designed for psychological disorders on the mental and physical aspects of IBS, both for those with comorbid mental illnesses and those without.

The Effects of Psychotherapeutic Treatments on Physical and Psychological Aspects of IBS

Psychotherapy is another effective non-traditional treatment method for individuals with IBS. In an interview-based study conducted by Harvey et al. (2018), more than 50% of participants with IBS reported a general aversion to taking medications for IBS. Many patients believed that rather than treating the underlying causes of their disorder, the medications simply masked their symptoms.

The Need for a More Holistic Approach for the Treatment of Irritable Bowel Syndrome

While IBS may not always be caused by psychological factors, the frequency of comorbidity with psychiatric disorders suggests that psychotherapeutic methods of treatment may be helpful in addressing the core origins of the disorder in some patients, as opposed to using purely medical interventions. This is especially true in the frequent cases in which traumatic experiences like war or abuse are concurrent with IBS (Creed et al., 2005; Maguen et al., 2014). Perhaps because of this common cooccurrence of mental illness and IBS, several different kinds of therapies have proven to be successful in treating both the psychological and physical symptoms of this disorder and should therefore be considered for the personalized, holistic treatment of IBS.

Effective Psychotherapeutic Models

One therapeutic model shown to be especially efficacious for IBS is MBCT. A study of women with IBS found that compared to a wait-list control group, the group that took part in MBCT sessions specifically adapted for IBS reported significant improvements in IBS symptom severity, levels of depression and anxiety, and quality of life (Henrich et al., 2020). Another study measured and compared the effects of different therapy techniques (dialectical behavior therapy, MBCT, and positive psychotherapy) on the perceived stress and quality of life of people with IBS (Mohamadi et al., 2019). While the results showed greater improvements in each of the therapy groups than in the control group, it also found that MBCT in particular was more effective than the other therapies in lowering participants' perceived stress levels. Due to its apparent positive impact on somatic and psychological aspects of IBS, MBCT should be considered by clinicians as a prospective treatment option for patients with IBS.

Exposure therapy, which involves intentionally putting the patient in anxiety inducing situations, is another highly effective treatment for anxiety disorders and has shown promise as part of a therapeutic treatment of IBS. Craske et al. (2011) conducted a study to test the efficacy of a treatment which combined aspects of cognitive-behavioral therapy (CBT) and exposure therapy. When compared with a control group and a stress management group, the group that received the CBT treatment featuring interoceptive exposure to visceral sensations (meaning the strategic introduction of feared feelings within the internal organs) experienced significantly better results in several categories, including IBS-related anxiety and pain vigilance. A similar study was conducted by Ljótsson et al. (2014) which

directly compared the effects of two internet-delivered CBT treatments, with the only difference being that one treatment included systematic exposure to IBS-related symptoms and experiences, while the other did not. The study found that the group who experienced the systematic exposure had greater improvement in IBS symptom severity than the group that received CBT alone. While CBT has been shown to be an effective treatment, the addition of exposure therapy can lead to even greater improvements in physical and psychological effects of IBS.

Alternative Options to Traditional Psychotherapy

While one argument against using psychotherapeutic treatment methods for patients with IBS is the inaccessibility thereof for many people, there are several potential alternatives to regularly meeting individually with a therapist which are also helpful for treating IBS. For example, studies have shown that gut-focused hypnotherapy (involving progressive relaxation and therapeutic suggestions focused on improving IBS symptoms) can produce significant positive results in improving physical and mental well-being in IBS patients, even when administered by a medical nurse or over Skype rather than in person by a psychologist (Hasan et al., 2019; Lövdahl et al., 2015). Another alternative psychotherapeutic treatment option was tested by Hunt et al. (2015) in a study where participants with IBS were given a CBT self-help workbook specifically for IBS. Despite a small sample size and other limitations, the success found in those who did complete the study is an indication that self-help workbooks based on IBS-focused psychotherapy techniques may be viable components in the treatment of IBS. Therefore, even in circumstances where traditional therapy may be impractical, clinicians do not have to rule out psychotherapeutic treatment options.

Another option to make these therapeutic treatments more accessible to the general public without losing the benefits of a trained therapist is administering them in the form of group therapy sessions. Because of the ability to accommodate more patients at a time, group therapy is generally less expensive, which provides a more accessible option for patients with IBS seeking psychotherapeutic treatment (Berens et al., 2018). Ljótsson et al. demonstrated the effectiveness of group therapy in their 2010 study. The study involved 34 individuals with IBS who participated in 10 weeks of group therapy sessions focused on exposure and mindfulness. The results indicated improvement in levels of pain, bloating, anxiety, social functioning, and other variables. Although

this study had limitations such as the lack of a control group and small sample size, its findings are supported by a study done by Berens et al. (2018). This study measured the effects of group therapy designed specifically for patients with IBS and found moderate success, indicating that group therapy is a suitable treatment option. Due to the success found in these studies, clinicians can recommend group therapy as a viable psychological treatment for individuals with IBS.

Conclusion

The main limitation of this literature review is a lack of recent studies on this important subject. In order to more fully help IBS patients, more research should be done on IBS treatments, specifically psychology-based treatments. While there is a lot of evidence to back up the use of psychotherapy as a treatment for IBS, more research is required to get a better picture of which psychopharmacological treatments are effective and to what degree they are effective (Henrich et al., 2020; Ljótsson et al., 2014). A study should also be done comparing patients' experiences with the current "traditional" (medical-focused) method of treatment versus experiences with a clinician who provides psychological questionnaires and then develops an individualized treatment plan based on those results. This further research and implementation of the principles discussed can make an incredible difference in the lives of thousands of people who suffer from IBS.

IBS is a complex disorder with unique components for each patient, making it necessary for patients to receive individualized treatment. Many studies have demonstrated that IBS can be more than a physical illness and that integrating psychopharmacological and psychotherapeutic interventions into a holistic treatment plan can have great benefits for people with IBS (Craske et al., 2011; Ljótsson et al., 2014; Muscatello et al., 2010). By assessing the psychological aspects of each patient's individual diagnosis, physicians can gain a better idea of an effective treatment plan for that individual, potentially including medication like antispasmodics or antidepressants and therapeutic treatments like MBCT. This review provides an analysis of several treatment methods (specifically those with foundations in psychology) in order to illustrate that integration of psychological and physical treatments into a more holistic approach is a viable way to combat the lack of individualization. In addition to being valuable for physicians treating IBS, these findings are also important for patients who suffer

The Need for a More Holistic Approach for the Treatment of Irritable Bowel Syndrome

from this disorder since they can also look into different treatment options and discuss them with their physicians. For many, integrating psychological-based methods into their treatment plan could make all the difference for both their physical and mental health.

References

Berens, S., Stroe-Kunold, E., Kraus, F., Tesarz, J., Gauss, A., Niesler, B., Herzog, W., & Schaefert, R. (2018). Pilot-RCT of an integrative group therapy for patients with refractory irritable bowel syndrome (ISRCTN02977330). *Journal of Psychosomatic Research, 105,* 72–79. https://doi-org.erl.lib.byu.edu/10.1016/j.jpsychores.2017.12.002

Brennan, B. P., Fogarty, K. V., Roberts, J. L., Reynolds, K. A., Pope, H. G., Jr, & Hudson, J. I. (2009). Duloxetine in the treatment of irritable bowel syndrome: An open-label pilot study. *Human Psychopharmacology, 24*(5), 423–428. https://doi.org/10.1002/hup.1038

Cho, H. S., Park, J. M., Lim, C. H., Cho, Y. K., Lee, I. S., Kim, S. W., Choi, M. G., Chung, I. S., & Chung, Y. K. (2011). Anxiety, depression and quality of life in patients with irritable bowel syndrome. *Gut and Liver, 5*(1), 29–36. https://doi.org/10.5009/gnl.2011.5.1.29

Craske, M. G., Wolitzky-Taylor, K., Labus, J., Wu, S., Frese, M., Mayer, E. A., & Naliboff, B. D. (2011). A cognitive-behavioral treatment for irritable bowel syndrome using interoceptive exposure to visceral sensations. *Behaviour Research and Therapy, 49*(6–7), 413–421. https://doi-org.erl.lib.byu.edu/10.1016/j.brat.2011.04.001

Creed, F., Guthrie, E., Ratcliffe, J., Fernandes, L., Rigby, C., Tomenson, B., Read, N., & Thompson, D. G. (2005). Reported sexual abuse predicts impaired functioning but a good response to psychological treatments in patients with severe irritable bowel syndrome. *Psychosomatic Medicine, 67*(3), 490–499. https://doi-org.erl.lib.byu.edu/10.1097/01.psy.0000163457.32382.ac

Creed, F., Tomenson, B., Guthrie, E., Ratcliffe, J., Fernandes, L., Read, N., Palmer, S., & Thompson, D. G. (2008). The relationship between somatization and outcome in patients with severe irritable bowel syndrome. *Journal of Psychosomatic Research, 64*(6), 613–620. https://doi.org/10.1016/j.jpsychores.2008.02.016

Farnam, A., Somi, M. H., Farhang, S., Mahdavi, N., & Besharat, M. A. (2014). The therapeutic effect of adding emotional awareness training to standard medical treatment for irritable bowel syndrome: A randomized clinical trial. *Journal of Psychiatric Practice, 20*(1), 3–11. https://doi.org/10.1097/01.pra.0000442934.38704.3a

Harding, K., Simpson, T., & Kearney, D. J. (2018). Reduced symptoms of post-traumatic stress disorder and irritable bowel syndrome following mindfulness-based stress

The Need for a More Holistic Approach for the Treatment of Irritable Bowel Syndrome

reduction among veterans. *The Journal of Alternative and Complementary Medicine, 24*(12), 1159–1165. https://doi-org.erl.lib.byu.edu/10.1089/acm.2018.0135

Harvey, J. M., Sibelli, A., Chalder, T., Everitt, H., Moss-Morris, R., & Bishop, F. L. (2018). Desperately seeking a cure: Treatment seeking and appraisal in irritable bowel syndrome. *British Journal of Health Psychology, 23*(3), 561–579. https://doi.org/10.1111/bjhp.12304

Hasan, S. S., Pearson, J. S., Morris, J., & Whorwell, P. J. (2019). Skype hypnotherapy for irritable bowel syndrome: Effectiveness and comparison with face-to-face treatment. *International Journal of Clinical and Experimental Hypnosis, 67*(1), 69–80. https://doi-org.erl.lib.byu.edu/10.1080/00207144.2019.1553766

Henrich, J. F., Gjelsvik, B., Surawy, C., Evans, E., & Martin, M. (2020). A randomized clinical trial of mindfulness-based cognitive therapy for women with irritable bowel syndrome—Effects and mechanisms. *Journal of Consulting and Clinical Psychology, 88*(4), 295–310. https://doi.org/10.1037/ccp0000483

Hunt, M. G., Ertel, E., Coello, J. A., & Rodriguez, L. (2015). Empirical support for a self-help treatment for IBS. *Cognitive Therapy and Research, 3*9, 215–227. https://doi-org.erl.lib.byu.edu/10.1007/s10608-014-9647-3

Kaplan, A., Franzen, M. D., Nickell, P. V., Ransom, D., & Lebovitz, P. J. (2014). An open-label trial of duloxetine in patients with irritable bowel syndrome and comorbid generalized anxiety disorder. *International Journal of Psychiatry in Clinical Practice, 18*(1), 11–15. https://doi.org/10.3109/13651501.2013.838632

Kuiken, S. D., Tytgat, G. N., & Boeckxstaens, G. E. (2003). The selective serotonin reuptake inhibitor fluoxetine does not change rectal sensitivity and symptoms in patients with irritable bowel syndrome: A double blind, randomized, placebo-controlled study. *Clinical Gastroenterology and Hepatology: the Official Clinical Practice Journal of the American Gastroenterological Association, 1*(3), 219–228. https://doi.org/10.1053/cgh.2003.50032

Ljótsson, B., Andréewitch, S., Hedman, E., Rück, C., Andersson, G., & Lindefors, N. (2010). Exposure and mindfulness based therapy for irritable bowel syndrome—An open pilot study. *Journal of Behavior Therapy and Experimental Psychiatry, 41*(3), 185–190. https://doi.org/10.1016/j.jbtep.2010.01.001

Ljótsson, B., Hesser, H., Andersson, E., Lackner, J. M., El Alaoui, S., Falk, L., Aspvall, K., Fransson, J., Hammarlund, K., Löfström, A., Nowinski, S., Lindfors, P., & Hedman, E. (2014). Provoking symptoms to relieve symptoms: A randomized controlled dismantling study of exposure therapy in irritable bowel syndrome. *Behaviour Research and Therapy, 55*, 27–39. https://doi-org.erl.lib.byu.edu/10.1016/j.brat.2014.01.007

Lövdahl, J., Ringström, G., Agerforz, P., Törnblom, H., & Simrén, M. (2015). Nurse-administered, gut-directed hypnotherapy in IBS: Efficacy and factors predicting a positive response. *American Journal of Clinical Hypnosis, 58*(1), 100–114. https://doi-org.erl.lib.byu.edu/10.1080/00029157.2015.1030492

Lovell, R. M., & Ford, A. C. (2012). Global prevalence of and risk factors for irritable

The Need for a More Holistic Approach for the Treatment of Irritable Bowel Syndrome

bowel syndrome: A meta-analysis. *Clinical Gastroenterology and Hepatology, 10*(7), 712–721. https://doi.org/10.1016/j.cgh.2012.02.029

Maguen, S., Madden, E., Cohen, B., Bertenthal, D., & Seal, K. (2014). Association of mental health problems with gastrointestinal disorders in Iraq and Afghanistan veterans. *Depression and Anxiety, 31*(2), 160–165. https://doi.org/10.1002/da.22072

MacLean, E. W., Palsson, O. S., Turner, M. J., & Whitehead, W. E. (2012). Development and validation of new disease-specific measures of somatization and comorbidity in IBS. *Journal of Psychosomatic Research, 73*(5), 351–355. https://doi-org.erl.lib.byu.edu/10.1016/j.jpsychores.2012.08.007

Masand, P. S., Gupta, S., Schwartz, T. L., Kaplan, D., Virk, S., Hameed, A., & Lockwood, K. (2002). Does a preexisting anxiety disorder predict response to paroxetine in irritable bowel syndrome? *Psychosomatics, 43*(6), 451–455. https://doi.org/10.1176/appi.psy.43.6.451

Masand, P. S., Pae, C., Krulewicz, S., Peindl, K., Mannelli, P., Varia, I. M., & Patkar, A. A. (2009). A double-blind, randomized, placebo-controlled trial of paroxetine controlled-release in irritable bowel syndrome. *Psychosomatics, 50*(1), 78–86. https://doi.org/10.1176/appi.psy.50.1.78

Mohamadi, J., Ghazanfari, F., & Drikvand, F. M. (2019). Comparison of the effect of dialectical behavior therapy, mindfulness based cognitive therapy and positive psychotherapy on perceived stress and quality of life in patients with irritable bowel syndrome: A pilot randomized controlled trial. *Psychiatric Quarterly, 90*(3), 565–578. https://doi.org/10.1007/s11126-019-09643-2

Muscatello, M. R. A., Bruno, A., Pandolfo, G., Micò, U., Stilo, S., Scaffidi, M., Consolo, P., Tortora, A., Pallio, S., Giacobbe, G., Familiari, L., & Zoccali, R. (2010). Depression, anxiety and anger in subtypes of irritable bowel syndrome patients. *Journal of Clinical Psychology in Medical Settings, 17*, 64–70. https://doi-org.erl.lib.byu.edu/10.1007/s10880-009-9182-7

Porcelli, P., De Carne, M., & Leandro, G. (2017). The role of alexithymia and gastrointestinal-specific anxiety as predictors of treatment outcome in irritable bowel syndrome. *Comprehensive Psychiatry, 73*, 127–135. https://doi-org.erl.lib.byu.edu/10.1016/j.comppsych.2016.11.010

Shivaji, U., & Ford, A. (2015). Beliefs about management of irritable bowel syndrome in primary care: Cross-sectional survey in one locality. *Primary Health Care Research & Development, 16*(3), 263–269. https://doi.org/10.1017/S1463423614000383

Tosic-Golubovic, S., Miljkovic, S., Nagorni, A., Lazarevic, D., & Nikolic, G. (2010). Irritable bowel syndrome, anxiety, depression and personality characteristics. *Psychiatria Danubina, 22*(3), 418–424. https://www.google.com/

Published by BYU ScholarsArchive, 2020