A Comprehensive Self-Management Irritable Bowel Syndrome Program Produces Sustainable Changes in Behavior After 1 Year

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BACKGROUND & AIMS: **We developed a comprehensive self-management (CSM) program that combines cognitive behavioral therapy with relaxation and dietary strategies; 9 sessions (1 hour each) over 13 weeks were shown to reduce gastrointestinal symptoms and increase quality of life in a randomized trial of patients with irritable bowel syndrome (IBS), compared with usual care. The aims of this study were to describe strategies patients with IBS selected and continued to use, 12 months after the CSM program began.**

METHODS: **We performed a cohort study to continue to follow 81 adults with IBS (87% female; mean age, 45 ± 15 years old) who received the CSM program in the previous clinical trial. During the last CSM session, participants selected strategies they intended to continue using to manage their IBS. CSM strategies were categorized into subthemes of diet (composition, trigger foods, meal size or timing, and eating behaviors), relaxation (specific relaxation strategies and lifestyle behaviors), and alternative thoughts (identifying thought distortions, challenging underlying beliefs, and other strategies). Twelve months later, participants were asked how often they used each strategy (not at all or rarely, occasionally, often, very often, or almost always).**

RESULTS: **At the last CSM session, 95% of the patients selected the subthemes of specific relaxation strategies, 90% selected diet composition, and 90% identified thought distortions for continued use. At 12 months, 94% of the participants (76 of 81) were still using at least 6 strategies, and adherence was greater than 79% for all subthemes.**

CONCLUSIONS: **We developed a CSM program to reduce symptoms and increase quality of life in patients with IBS that produced sustainable behavioral changes in almost all patients (94%) after 1 year of follow-up.**

Keywords: Alternative Medicine; Self-Management; Behavioral Therapy; Psychology.

There is increasing evidence that psychological treatments, such as cognitive behavioral therapy, relaxation therapies, and dietary management, are effective strategies for the management of patients with irritable bowel syndrome (IBS).[1] Our team therefore combined these strategies to develop a 9-week comprehensive self-management (CSM) program for patients with IBS.[2] In a prior study by our team, 188 adult patients with IBS randomized to our CSM program demonstrated greater improvements in daily diary gastrointestinal (GI) symptom scores and quality of life (QOL) ($P < .001$) compared with usual care for at least 12 months.[2] This follow-up study explores patients' perspectives on which strategies were considered the most effective for IBS symptom management and the adherence to each strategy at 12 months.

Understanding which nonmedication therapies patients with IBS prefer could help determine which strategies to emphasize during CSM teachings, leading to improved patient adherence and more appropriate use of medical resources.[3] There are few studies describing patient's attitudes on and preferences of IBS nonmedication treatments. In a telephone questionnaire study, Heitkemper et al[4] asked 1014 women with IBS about the use of 6 common nonmedication treatments. Diet (67%), relaxation exercises (38%), and stress reduction techniques (33%) were more commonly tried than psychotherapy (13%) and biofeedback (6%).[4] In a questionnaire study by Harris and Roberts,[5] 645 patients with IBS evaluated their acceptability of

Abbreviations used in this paper: CSM, comprehensive self-management; GI, gastrointestinal; IBS, irritable bowel syndrome; QOL, quality of life; SD, standard deviation.

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the following treatments: tablets, diet change, yoga, stomach cream, homeopathy, heat pad, hypnotherapy, acupuncture, and suppositories. The most acceptable treatments were diet (82%) and yoga (77%).[5] We hypothesized that our participants would also preferentially select dietary and relaxation over alternative thinking strategies.

Self-reported adherence rates in the study by Heitkemper et al[4] were 47% when patients with IBS were asked if they followed their physician's IBS treatment recommendations "most of the time." Adherence rates for behavioral interventions for other chronic medical conditions varied between 11% and 21%.[6–8] Given that our participants can select which CSM strategies to continue, we hypothesized that adherence rates for this study would be >50%.

The aim of this study was to describe which CSM strategies participants preferred immediately following the CSM program and adhered to at 12 months. We also assessed whether the ongoing use of specific CSM strategies at 12 months was associated with greater improvements in GI symptom scores. Finally, we evaluated whether patients' CSM strategy selections at the last session and at 12 months were related to any underlying demographic or clinical characteristics. Findings from this study provide clinicians insight on CSM strategies patients with IBS find helpful and are able to adhere to.

Methods

This is a cohort study using follow-up data from a randomized trial of in-person or telephone CSM intervention versus usual care for adults with IBS (previously described elsewhere).[2] Eighty percent (101 of the 126 participants) randomized to receive CSM intervention completed a comprehensive plan at their final CSM session and were included in this present analysis. Eighty-one participants (80%) provided 12-month follow-up data. Human participants institutional review approval was obtained before enrolling participants (May 2002). This study was registered with clinicaltrials.gov through the US National Institutes of Health.

Comprehensive Self-Management Sessions

The program was delivered in 9 sessions each lasting 1 hour within a 13-week period by 2 trained psychiatric nurse therapists. CSM sessions covered 3 main themes: (1) diet, (2) relaxation, and (3) alternative thoughts. Supplementary Table 1 provides an overview of the educational material covered during each CSM session and its corresponding homework assignments.

Specific strategies within each main theme were selected for each participant based on individualized assessments by the nurse therapist. For "diet," participants completed a Food Frequency Questionnaire and food diary.[9] A registered dietitian reviewed these items to identify specific problems in a participant's diet for tailored strategies. For "alternative thoughts," participants completed a worksheet to help identify problematic thoughts following a specific event. To mitigate therapist bias, the provided workbook was written by 2 nurse therapists. All sessions were also recorded and reviewed by a separate nurse therapist to provide feedback if an inappropriate emphasis was spent on specific CSM strategies.

Comprehensive Plan

As the final homework assignment, participants were asked to write a comprehensive plan that specified which strategies they found the most helpful and planned on using over the next year in managing their IBS symptoms. The strategies included by each participant were categorized by P.B. into one of the strategies introduced from the CSM program. J.K.Z., a gastroenterologist, confirmed this categorization. Any disagreements on categorizations were resolved by a discussion between P.B. and J.K.Z. Table 1 outlines the CSM strategies within each main theme and subtheme.

Use of Comprehensive Self-Management Program Strategies at 12 Months

At 12 months while participants were being reassessed for the parent study's outcome measures, the nurse therapist would contact participants and assess whether they were still using each of the CSM strategies in their comprehensive plan by asking: "How often do you use this strategy?" Participants answered using one of the following responses: not at all/rarely, occasionally (at least 1 day a week), often (at least 2 days a week), very often (at least 4 days a week), or almost always.

Statistical Analysis

There was no significant difference in the strategies selected to be part of the comprehensive plan between participants randomized to receive CSM in-person or by telephone (data not shown). The data from the 2 intervention arms in the parent study were therefore combined for this study. Chi-square tests and Student *t* tests were used to test whether those who provided strategy use data at 12 months differed from those who did not.

CSM strategy preferences at the last treatment session were described as the percentage of participants selecting each CSM strategy in their comprehensive plan among all participants who provided such a plan (N = 101). At 12 months, CSM strategy use and adherences were described as the percentage of participants still "using" each CSM strategy among all participants and among all participants who selected it