Extended Abstract

The Efficacy of Guided Imagery/Visualization & Journaling in Patients with Irritable Bowel Syndrome

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A guided-imagery/visualization and journaling protocol, as part of a multi-component treatment program, was tested as a treatment for irritable bowel syndrome (IBS). IBS is a functional disorder of the lower gastrointestinal tract characterized by abdominal pain and altered bowel habits. It has worldwide prevalence rates ranging between 9 and 23%. It is the most frequently diagnosed GI disorder in both clinical settings and the general population, accounting for an estimated 28% of patients seen by gastroenterologists and approximately 12% of those seen in primary care settings. In comparison to other diseases in the United States, IBS is more prevalent than diabetes (3%), asthma (4%), heart disease (8%), and hypertension (11%). IBS effects an estimated 10-20% of adolescents and adults, with 14-24% incidence in females and 5-19% in males—a discrepancy that is also common to males in India and Japan and which may reflect increased healthcare-seeking behavior in women. The overall prevalence of IBS fluctuates with age; a prevalence rate of 14% occurs in individuals between 15 and 44 years old, and decreases to approximately 9% after age 45.

Fifty-two women and men diagnosed with irritable bowel syndrome (IBS) by their personal physician or gastroenterologist were initially interviewed for the study. All met the Rome II criteria for IBS. Participants were recruited by two local internists and through fliers posted in two medical buildings and one senior center. Additionally, study administrators ran newspaper advertisements for IBS volunteers every Tuesday for three consecutive weeks. These ads appeared in two local newspapers (twice in the Rocky Mountain News and once in the Denver Post); both with average circulations of 300,000 copies per day.

Participant inclusion criteria were as follows: at least 18 years of age and have received a diagnosis of IBS from their physician or gastroenterologist. Exclusion criteria included having a secondary gastrointestinal diagnosis such as IBD, which is beyond the scope of this study. Hence, two participants were excluded for Crohnís disease and ulcerative colitis, and nine others dropped out because of schedule conflicts, lack of verifiable diagnosis, and problems with transportation.

The final sample for the treatment group included 20 females and 0 males (n = 20), whereas the control group included 18 females and 3 males (n = 21). The average age for the treatment group was 48.35 years (range 18-84 years, SD = 17.83 years) with a mean of 14.82 years with IBS (range 0 years to 38 years, SD = 11.59 years). The average age for the control group was 44.19 (range 19-63 years, SD = 13.08) with a mean of 13.92 years with IBS (range 2-30 years, SD = 8.58).

Marital Status for the treatment group: Married: 15; Single: 3; and Divorced: 2. Control Group: Married: 10; Single: 5; Divorced: 5; and Widowed: 1. Annual Income for the treatment group: Earnings of $25,000 and under: 4; $25,000-$50,000: 4; $50,000-$75,000: 2; $75-$150,000: 4; and $150,000 and over: 5. Control group: Earnings of $25,000 and under: 1; $25-$50,000: 5; $50-$75,000: 8; $75-$150,000:5; and $150,000 and over: 1. One individual from each group failed to report income. Years of Education for the treatment group: High School: 5; College: 9; and Post Graduate: 6. Control Group: High School: 5; College: 14; and Post Graduate: 2.

Participants self-selected into treatment or control group, stating a preference for one or the other at the time of the initial interview. Participants opting for the control condition agreed to participate in the treatment condition following completion of the present study. Groups were equivalent based on mean age and years with IBS.

There were no statistically significant differences between the treatment and control groups with regard to age (t [39] =-0.85, p = .40) and years with IBS (t [39] = -0.26, p = .80). Comparisons of the two groups for gender, marital status, income, and years of education did not produce statistically valid results because more than 20% of the cells in the cross tabulation table used in the Chi-square analyses had expected frequencies less than 5.

IBS-Quality of Life Scores (IBS-QOL). To determine if participation in the RIM method improved quality of life as measured by the overall and subscale scores from the IBS-QOL, two-factor repeated measures ANOVAs were executed. ANOVA results for the test of the group-by-time interaction and group-by-time means and standard deviations are presented in Table I. The test of the ìgroup-by-timeî term addresses the question of whether or not the four "group-by-time" means are equal. Inequality of means suggests that there may be significant changes in quality of life related to the RIM method.

Statistically significant differences were found for all the subscales and overall scores at the .05 alpha level. Thus, the hypothesis that the RIM method would increase quality of life for personsí suffering from IBS was confirmed.

Table I

ANOVA for a Two-Factor Repeated-Measures Design (IBS-QOL)

	Control		Treatment			
	Pre mean (SD)	Post mean (SD)	Pre mean (SD)	Post mean (SD)	*F*	*p*
Scale						
Dysphoria	74.41 (16.55)	78.27 (13.82)	58.59 (26.69)	78.91 (20.12)	10.35	.003
Interference w/ Activity	74.66 (18.83)	75.51 (19.04)	55.18 (26.84)	76.07 (19.36)	16.77	.000
Body Image	69.05 (20.81)	69.36 (20.60)	53.13 (25.21)	70.63 (17.69)	25.62	.000
Health Worty	69.84 (22.44)	72.22 (20.13)	57.50 (26.48)	75.42 (16.10)	12.31	.001
Food Avoidance	54.37 (25.50)	54.76 (28.33)	43.75 (30.93)	55.42 (29.40)	4.75	.035
Social Reactio	75.89 (17.71)	77.98 (18.61)	72.19 (22.71)	84.69 (14.97)	8.00	.007
Sexual	76.19 (27.02)	79.17 (23.16)	66.88 (26.37)	81.25 (22.40)	6.87	.012
Relationships	71.43 (16.79)	73.81 (17.54)	69.58 (26.11)	82.08 (19.92)	6.75	.013
Overall	71.67 (14.25)	73.67 (14.34)	58.90 (21.42)	76.07 (16.25)	20.26	.000

Table II

Results of Post Hoc Comparisons for Overall and Subscale of IBSQOL

	Pre vs. Post		Control vs. Treatment	
Scale	**Control**	**Treatment**	**Pre**	**Post**
Dysphoria		***	*	
Interference with Activity		***	**	
Body Image		***	*	
Health Worry		***		
Food Avoidance		**		
Social Reaction		***		
Sexual		***		
Relationships		***		
Overall		***	*	

*** Statistically different at the $p < .001$
** Statistically different at the $p < .01$
* Statistically different at the $p < .05$

As a follow-up to the significant interactions, post hoc comparisons were conducted within groups to determine change between pre and post-test as well as at pre and post-test in order to uncover any differences. The results of these comparisons are shown in Table II. There were no pre-post differences for the control group; the treatment group was found to have statistically significant improvement from pre-test to post-test. Within time-group comparisons indicated that at pre-test, the treatment group reported more dysphoria, interference with activity, dissatisfaction with body image, and a reduction in overall quality of life. At post-test, treatment and control group subscales were equivalent, as were over-all quality of life scores.

Overall, these results suggest that the treatment group experienced a significant improvement in quality of life. Implications and discussions are included for further research using guided imagery and visualization as part of a multi-component treatment program for reducing symptoms associated with IBS.

Taking IBS to the Next Level. In successive trials aiming to measure IBS symptom-reduction using similar protocols, certain guidelines are suggested to improve study design and outcome measures. It will be necessary for individual components involved in this multi-component treatment program to be isolated and tested in order to determine whether individual therapies can achieve similar results when utilized independently.

The RIM multi-component treatment program introduced in this study—particularly the GIV and journaling treatments contained in the original RIM method— could be utilized in satellite programs for treatment of long-distance IBS patients. As reported previously, this study prompted numerous inquiries from outlying IBS sufferers looking for treatments that were either unavailable in their particular region or unobtainable due to an inability to leave the house for fear of "accidents."

With previous IBS research stressing the importance of group interaction for retention of and involvement in treatment, little thought was given to independent utilization of this intervention for IBS symptom-reduction. However, it became clear during the course of this study that numerous housebound and/or outlying IBS patients lacked adequate medical treatment. Future programs for these individuals could be packaged as ìsatelliteî GIV and journaling or multi-component intervention protocols; ìgroup interactionî would be supplanted by auxiliary communication comprised of phone and/or email communication to reinforce new concepts. Alternatively, the PI could meet with these patients once or twice a month during treatment to facilitate these satellite programs.

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