

# Hypnotherapy for irritable bowel syndrome in Saudi Arabian patients

M.A. Al Sughayir<sup>1</sup>

معالجة مرضى متلازمة الأمعاء المتهيجّة في المملكة العربية السعودية بالتنويم  
محمد بن عبد الله الصغير

**الخلاصة:** قام الباحث بدراسة مدى نجاعة المعالجة بالتنويم لمرضى متلازمة الأمعاء المتهيجّة في المملكة العربية السعودية. وقد تم إحضار المرضى (العدد = 26) إلى عيادة خارجية للطب النفسي، بعد تشخيصهم من قِبَل طبيب الجهاز الهضمي، وإجراء تقييم طبي لمتلازمة الأمعاء المتهيجّة. وخضع كل مريض إلى 12 جلسة معالجة تنويمية على مدى 12 أسبوعاً (بمعدل جلسة كل أسبوع). وقام المرضى باستكمال مؤشر قياس وخامة الأعراض قبل التجربة وبعدها بثلاثة شهور. فثبت أن المعالجة بالتنويم قد عزّزت الشعور بتحسّن نوعية الحياة لدى المرضى الذكور أكثر من الإناث، في حين انخفض الشعور بعدم الرضاء عن عادة التغوّط لدى الإناث أكثر من الذكور.

**ABSTRACT** This study investigated whether hypnotherapy provides a significant therapeutic effect in Saudi Arabian patients with irritable bowel syndrome. Patients ( $n = 26$ ) were consecutively recruited at a psychiatry outpatient clinic after diagnosis by a gastroenterologist and a medical evaluation for irritable bowel syndrome. Each patient had 12 sessions of hypnotherapy over a period of 12 weeks (1 session per week). Patients completed a scale measuring symptom severity before and 3 months after the trial. Hypnotherapy significantly enhanced a feeling of better quality of life more in male than in female patients, and bowel habit dissatisfaction was reduced more in female than in male patients.

## L'hypnothérapie dans le traitement du côlon irritable en Arabie saoudite

**RÉSUMÉ** Cette étude a cherché à déterminer si l'hypnothérapie a un effet thérapeutique significatif chez des Saoudiens souffrant du syndrome du côlon irritable (SCI). Les patients ( $n = 26$ ) d'une consultation externe de psychiatrie ont été recrutés consécutivement, après diagnostic par un gastroentérologue et évaluation médicale du syndrome du côlon irritable. Chaque patient a bénéficié de 12 séances d'hypnothérapie sur une période de 12 semaines (1 séance par semaine). Les patients ont mesuré sur une échelle la sévérité des symptômes avant l'étude et 3 mois après celle-ci. L'hypnothérapie a davantage renforcé de manière significative l'impression d'une meilleure qualité de vie chez les hommes que chez les femmes, tandis que ces dernières ont été plus nombreuses que les hommes à déclarer une diminution de l'inconfort lié à l'émission des selles.

<sup>1</sup>Department of Psychiatry, College of Medicine, King Saud University, Riyadh, Saudi Arabia  
(Correspondence to M.A. Al Sughayir: fmrahim@ksu.edu.sa).

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## Introduction

Irritable bowel syndrome (IBS) is the prototype of the functional gastrointestinal disorders. It is estimated to affect 15%–20% of the general population at any one time [1], and although only a small proportion (as few as 4% of all IBS sufferers) see a hospital specialist [2] they account for approximately half of gastroenterologists' workload [3,4]. In one study sufferers used health service resources to a greater extent and missed more days off work than the control group [5].

Approximately 15% of IBS patients are not helped by medical intervention and their symptoms persist, often resulting in extensive investigation using health service resources [6]. Patients with IBS have significantly poorer health quality of life than the general population [5,7]. Treatment methods have evolved towards use of more integrated multicomponent pharmacological and behavioural strategies based on the psychosocial factors influencing the patients' pattern of symptoms.

In 1984, Whorwell et al. [8] in Manchester, England published a well-designed trial of hypnosis as a treatment of IBS. The results indicated that hypnosis treatment had specific therapeutic effects that potentially improved the central IBS symptoms of all the patients in that group. In a follow-up article [9], the investigators reported that clinical improvement was maintained in all the hypnotherapy patients during a 2-year post-treatment period. Several subsequent hypnosis studies by the same Manchester group [10–13] and by other investigators in many countries [14–17] have confirmed the high efficacy of hypnosis in IBS treatment.

Studies on IBS in Arabic countries, to the best of author's knowledge, are limited and descriptive in nature [18–22]. This study was undertaken in Saudi Arabia to

determine whether hypnotherapy provides a significant therapeutic effect in a sample of patients with IBS.

## Methods

### Patients

Patients were consecutively recruited and screened by clinical interview in the psychiatric outpatient clinic at King Abdulaziz University Hospital in Riyadh between June 2001 and May 2003. All enrolled subjects were of Saudi Arabian nationality, had been previously evaluated and diagnosed by at least 1 gastroenterologist and had completed a medical evaluation for IBS.

IBS was defined as the presence of abdominal pain or discomfort that is relieved with defecation and/or associated with changes in consistency of stool, abdominal distension and disturbed bowel habit [23]. Patients were excluded from the study if they had a history of abdominal surgery for gastrointestinal diseases other than appendectomy. Patients taking medications for IBS or psychotropic medications were also excluded because these could interfere with the assessment of the hypnotherapy effect.

No control group was used as it was considered unethical to leave a randomly selected control group of patients untreated as IBS is often a source of great distress and the point at which a patient seeks professional help is of major significance and often decisive for the results of treatment.

### Scale

IBS severity was scored before and after treatment using the Irritable Bowel Severity Scoring System [24], which is a validated, sensitive and reliable scale for monitoring the severity of IBS [10]. It is a visual analogue self-administered scale incorporating the following items:

- abdominal pain (severity and frequency)
- abdominal distension
- bowel habit dissatisfaction (the patient's degree of dissatisfaction with a visit to the toilet) and
- interference with quality of life; overall view on how much IBS is affecting or interfering with patient's life in general (social, occupational, academic).

The scale was translated from English into Arabic and then back into English by 2 psychiatrists for linguistic equivalence.

### Therapy

Hypnotherapy was conducted at the outpatient psychiatry clinic by the author (a consultant psychiatrist with expertise in clinical hypnosis) adopting the method of Whorwell [25] modified by Vidakovic-Vukic [14]. This was as follows: during the first intake session the author tried to get to know patients as much as possible (their ideas, beliefs and expectations about the nature of hypnosis) to explain to them the physiological basis of their symptoms and to inform them about clinical hypnosis. After the induction of hypnosis, each patient was asked to place his/her hand on the abdomen, feel a sense of warmth and to visualize his gut, to symbolize it, in the way he pictures it to himself, then the patient was asked to modify the situation so as to make discomfort disappear and the normal function of the colon start in a smooth rhythmic action. All subjects were compliant with hypnotic instructions and were able to achieve a trance state as evidenced by a therapist's clinical observation and patient's report of subjective experience of deep physical and mental relaxation.

Patients were asked to practise these hypnotic skills on a daily basis with the help of an audiotape similar in content to the clinical sessions. All subjects were

motivated to go through hypnotherapy. None of the patients were receiving any other treatments for IBS at the time of the study. As IBS is usually a chronic, sometimes lifelong, condition with unpredictable periods of exacerbation and remission, the clinical trial extended over 12 weeks to establish whether hypnotherapy is effective or not. Weekly sessions of 1 hour each were conducted, which involved hypnotic induction using progressive relaxation and trance-deepening instructions.

Hypnotic susceptibility testing was found not necessarily predictive of how well patients respond in the clinical setting [26,27]. Therefore hypnotic ability was not measured in our subjects. To minimize hypnotherapy placebo effect posthypnotic scores were measured 3 months after the last hypnotic session, and patients were instructed not to practise autohypnosis or use the hypnotherapy audiotape after the first 12 weeks.

### Statistical analysis

For evaluation of the effectiveness of hypnotherapy in the treatment of patients presenting with various complaints pertaining to IBS, we focused the analysis on percentage change in IBS index for each IBS complaint investigated. The percentage change in IBS index was computed as the difference between IBS index score before treatment minus the IBS index score after treatment, divided by the before treatment score, and then multiplied by 100 to express it as a percentage. For each IBS complaint investigated, cases with zero change in IBS index score were excluded from the analysis. To establish a cut-off value for percentage change in IBS index score that was of clinical importance, we pooled together all the non-zero percentage changes in IBS index score for all the variables investigated to find the median value (33.3%).

Therefore, for the present study, percentage changes in IBS index score  $\geq 33.3\%$  were regarded as an indication of clinically important effectiveness of hypnotherapy.

The results are presented as percentages or as mean and standard deviation (SD). The Mann–Whitney test was used to compare means from 2 independent groups (males versus females). Results presented in the form of a 2 x 2 contingency table were analysed using either the chi-squared test or Fisher's Exact test as appropriate.

For each patient the total score was computed before and after receiving therapy for the 5 items of IBS that were investigated. The changes between total scores before and after were investigated for statistical significance using the Wilcoxon test.

## Results

The study included 26 patients (12 males and 14 females). The median age was 34.5 years and their mean age was 37.3 (SD = 12.7) years for men and 36.7 (SD = 7.9) years for women.

The impact of hypnotherapy on IBS variables was assessed by examining the mean

levels of the IBS index scores before and after hypnotherapy intervention (Table 1). The changes in IBS index scores between the before-and-after treatment periods were statistically significant for all the IBS-related complaints ( $P < 0.001$ ; Wilcoxon test). For each one of the IBS-related complaints, the mean value for the IBS index scores for the period after hypnotherapy was substantially lower than that before therapy (Table 1).

Table 2 shows percentage changes in IBS index score by sex for various IBS variables. The results in Table 2 indicate that female patients experienced a significantly higher reduction in bowel habit dissatisfaction compared with male patients ( $P < 0.0417$ ; Mann–Whitney test), and hypnotherapy significantly reduced the interference of IBS with patient's quality of life in male more than female patients ( $P < 0.001$ ; Mann–Whitney test).

The mean percentage changes in IBS index score for the variables "severity of abdominal pain" and "frequency of abdominal pain" were higher in males than in females and were of clinical importance but the differences between the means for the 2 sexes did not attain statistical significance.

Table 1 Impact of hypnotherapy on irritable bowel syndrome (IBS)-related complaints

Variable	IBS index score				P-value <sup>a</sup>
	Before treatment		After treatment		
	Mean	SD	Mean	SD	
Severity of abdominal pain	76.9	9.7	49.2	10.2	< 0.001
Frequency of abdominal pain	73.1	8.8	44.6	7.6	< 0.001
Severity of abdominal distension	61.9	8.0	51.5	8.3	< 0.001
Bowel habits dissatisfaction	65.8	10.3	48.5	10.8	< 0.001
Interference with quality of life	58.1	14.1	40.4	9.2	< 0.001

SD = standard deviation.

<sup>a</sup>Wilcoxon test.

Table 2 Percentage changes in irritable bowel syndrome (IBS) index score by sex for various variables

Variable	No.	% change in IBS index score Male		% change in IBS index score Female		P-value	
		Mean	SD	Mean	SD		
Severity of abdominal pain	12	38.9	8.8	14	32.3	12.0	0.1293
Frequency of abdominal pain	12	41.7	10.7	14	35.9	10.0	0.1623
Severity of abdominal distension	12	20.8	6.4	11	18.3	5.1	0.3168
Bowel habit dissatisfaction	9	16.3	3.5	14	35.1	25.7	0.0417
Interference with quality of life	12	48.8	10.3	6	18.4	1.8	< 0.001

SD = standard deviation.

Using the cut-off point of  $\geq 33.3\%$  as the benchmark for evaluation of the therapeutic value of hypnotherapy to each one of the IBS complaints that were investigated, we examined the percentages of patients who experienced changes in the IBS index score  $\geq 33.3\%$  in both sexes (Table 3). The

best response to hypnotherapy occurred for the variable "interference with quality of life" where all the 12 male patients who underwent hypnotherapy experienced percentage change in IBS index score  $\geq 33.3\%$ . Among female patients, 11 out of 14 (78.6%) female patients experienced a

Table 3 Proportions of male and female patients treated with hypnotherapy with more and less than 33.3% change in symptom severity for various irritable bowel syndrome (IBS) complaints

Variable	Male		Female		Odds ratio	95% CI	P-value <sup>a</sup>
	No.	%	No.	%			
<i>Severity of abdominal pain</i>							
$\geq 33.3\%$ change	11	91.7	7	50.0	11.00	0.96–539.7	$P = 0.0617$
< 33.3% change	1	8.3	7	50.0			
<i>Frequency of abdominal pain</i>							
$\geq 33.3\%$ change	9	75.0	8	57.1	2.25	0.33–18.2	$P = 0.4291$
< 33.3% change	3	25.0	6	42.9			
<i>Severity of abdominal distension</i>							
$\geq 33.3\%$ change	0	0.0	1	9.1	NA	NA	$P = 0.4783$
< 33.3% change	12	100.0	10	90.9			
<i>Bowel habit dissatisfaction</i>							
$\geq 33.3\%$ change	0	0.0	11	78.6	NA	NA	$P < 0.001$
< 33.3% change	9	100.0	3	21.4			
<i>Interference with quality of life</i>							
$\geq 33.3\%$ change	12	100.0	0	0.0	NA	NA	$P < 0.001$
< 33.3% change	0	0.0	6	100.0			

<sup>a</sup>Comparison between males and females with respect to change in IBS  $\geq 33.3\%$ . The percentages were computed row-wise. The odds ratios were estimates of risks for males compared to females.

CI = confidence interval.

NA = not applicable because of zero frequency in one of the cells of a  $2 \times 2$  table.

clinically important reduction in IBS index score for "bowel habit dissatisfaction" after undergoing hypnotherapy as compared to 0 out of 9 male patients, and the difference between the percentages was statistically significant ( $P < 0.001$ ).

## Discussion

Results from this study highlighted that in this group of Saudi Arabian patients with IBS, hypnotherapy showed a positive impact on the IBS-related complaints, as shown in previous studies [8–17]. Hypnotherapy, as shown by recent research on gut motility, pain perception and hypnosis [27–29], may affect the brain–gut bi-directional communication and alter visceral perception and motor function through the influence of the sympathetic, parasympathetic, and enteric nervous systems.

Hypnotherapy in our sample had a comparatively different impact between male and female patients with respect to bringing about changes in IBS index scores. Male patients tended to benefit more from the therapy than female patients as they experienced higher mean percentage changes in IBS index scores than female patients with respect to the above IBS-related complaints, with the exception of bowel habit dissatisfaction where female patients responded better to the therapy than males. The principal factors that may help to explain the observed differences in response to hypnotherapy between male and female patients with IBS are not known, and require further research. However, new functional imaging techniques have shown differences between female and male patients with IBS in terms of the type of cortical activation induced by rectal distention [30]. However, it is not clear whether these neurophysiological differences between males and females can explain their different responses in bowel

habit dissatisfaction after undergoing hypnotherapy.

Improvement in quality of life in our patients can be explained by symptom reduction and improvement in psychological well-being and daily functioning after hypnotherapy. Previous studies [8–11,14] showed no significant differences between male and female patients in terms of their improvement in quality of life. However, in our sample, male patients experienced significantly better quality of life after undergoing hypnotherapy than female patients. This could be explained partly by the fact that most of our female patients (11 out of 14) were housewives. They were less likely to recognize appreciable differences in the parameters of quality of life such as satisfaction and coping with occupational demands.

A potential criticism for the use of hypnotherapy as a treatment for IBS has been that it is costly to provide because of the demands on the therapist's time and it requires multiple long sessions. However, in the long run there may be a net reduction in clinic visits and health care costs which offsets the initial cost of hypnotherapy [31]. Hypnotherapy is time-consuming and is therefore probably best reserved for refractory cases, as a proportion of patients with IBS respond to simple measures [8]. Patients treated with group hypnotherapy showed as great improvement in symptoms as those treated individually [32]. Therefore, group hypnotherapy should be cost-effective. A hindrance to widespread application of hypnotherapy for functional gastrointestinal disorders is the limited availability of suitably trained and experienced hypnotherapists.

The study has some limitations; it was based on a relatively small sample and there are possible confounding factors such as dietary factors, psychopathological states

of the patients and the degree of compliance with self-hypnosis. However, the preliminary data suggests that hypnotherapy can be of therapeutic value when integrated in the treatment procedures for IBS complaints in Saudi Arabian patients.

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