

MINDFULNESS BASED STRESS REDUCTION IN IRRITABLE BOWEL SYNDROME IN NORTH KARNATAKA POPULATION

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Abstract

Background: Irritable bowel syndrome (IBS) is a common and often debilitating chronic gastrointestinal disorder characterised by abdominal pain and altered bowel habits. Pharmacological treatments are often ineffective; hence, mindfulness-based stress reduction (MBSR) has significant improvement in idiopathic IBS. **Materials and Methods:** 95 adult patients aged between 25-60 years with IBS were counselled with IBS-SSS, VSI, FFMQ, and PHQ-12 questionnaires and followed up for three months. The clinical variables FFMQ, VSI, and IBS-SSS were compared after three months. **Result:** Five-facet mindful questionnaires were compared at baseline studies after three months of treatment (follow-up). Except for the FEMQ non-react score, all MBSR variables had a significant p value ($p < 0.001$). **Conclusion:** MBSR counselling for three months had significant improvement in GI symptoms.

INTRODUCTION

Irritable bowel syndrome (IBS) is a common and often debilitating chronic gastrointestinal disorder with primary symptoms of abdominal pain or discomfort and altered bowel habits.^[1] IBS is highly co-morbid with and shares several similarities with other chronic pain disorders (headache and fibromyalgia), including high health care costs and reduced quality of life.^[2] Among those individuals with IBS seeking treatment for their symptoms, quality of life (QOL) is as poor as that of adults with cardiac diseases and type II diabetes, while there is no known biological cause or biomarker of IBS disorder.^[3] Several psychological and mind-body therapies for chronic pain have demonstrated efficacy in IBS, including cognitive behaviour therapy (CBT), hypnosis, and mindfulness-based interventions. Mindfulness-based stress reduction (MBSR) is an intensive three-month manual workshop focused on the cultivation of mindfulness, defined as intentional, non-judgmental, present-focused awareness. It is hypothesised that MBSR will result in robust pre-post improvements in GI symptoms, QOL, and GI symptoms-related anxiety, replicating prior trials.^[4] Symptom improvement will be most closely associated with changes in mindfulness related to developing an attitude of non-judgmental acceptance towards improvement in GIT symptoms. Hence, an attempt is made to evaluate the patients after the 3rd

month of treatment, and their MBSR is compared with baseline studies.

MATERIALS AND METHODS

95 adult patients regularly visited the psychiatry department at Khaja Banda Nawaz Hospital Kalaburgi, Karnataka-585102 were studied.

Inclusive Criteria

Adult patients aged between 20 to 60 years with symptoms of IBS (irritable bowel syndrome) were selected for study.

Exclusion Criteria

Patients who are already under IBS treatment for serious medical conditions and are psychotic with suicidal features were excluded from the study.

Method: Clinical and psychological variables were assessed at baseline (pre-treatment) and treated for three months. Primary clinical outcomes were chosen to assess the degree of mindfulness and major domains of IBS severity, including the composite major of GI systems on the IBS-specific measure QOL (quality of life) and measure IBS-specific fear and anxiety (established) as important treatment targets for IBS and other chronic pain targets. Secondary outcomes were included to assess a border array of problem areas often reported by individuals with IBS, including negative effects, pain catastrophizing, widespread bodily pain, and magnetic resonance of the brain. Imaging scans were

completed at baseline and after 3 months of treatment separately.

Gastrointestinal symptoms severities were assessed using the severity score from the IBS-SSS, and a validated 5-item instrument was used to measure the severity of abdominal pain, distension, and dissatisfaction with bowel habits. Interference with quality of life (QOL) over past fear and anxiety was assessed using the VSI (visceral sensitivity index) related to IBS.

Mindfulness was assessed using the five Facet Mindfulness Questionnaires: observing, describing, acting with awareness, non-judging of inner experience, and non-reactivity to inner experience. FFMQ contains 39 items that are related on a 5-point Likert scale. The five-factor structure of the FFMQ has been confirmed in subsequent studies for persons who medicate or have participated in meditation counselling programmes like MBSR through observing scale is less destructive in meditation-naïve persons. Hence, FFMQ scores reflect greater mindfulness.

Symptoms of anxiety and depression were assessed using the Hospital Anxiety and Depression (HAD) scale over the past two weeks in non-psychotic patients. The Personal Health Questionnaire-12 (PHQ-12) is a validated scale assessing the degree to which an individual is bothered by common somatic symptoms, including back pain and headaches, over the course of two weeks. The pain catastrophizing scale (PCS) is a 13-item scale assessing pain-related catastrophizing thinking in three dimensions: helpfulness, rumination, and magnification. The total score was used in this analysis.

The duration of the study was from February 2023 to July 2023.

Statistical analysis: baseline analysis of FFMQ, IBS-SSS, IBS-QOL, and VSI observe describe, act-aware, non-judge, non-react HAD depression anxiety PCS versus IBS patients were compared with the IBS patients after three months by t test. The statistical analysis was carried out in SPSS software. The ratio of males and females was 2:1.

RESULTS

[Table 1] Five Facet Mindfulness Questionnaires Included, Observe, describe, and act aware. Non-judge Non-react, description and examples in irritable bowel syndrome (Baer et al).

[Table 2] Comparison of values in pre- and post-treatment variables in IRBS patients

- Variables IBS-SSS: 275.60 (\pm 70.3) at baseline, 125.78 (\pm 65.8) after three months; t test was 15.1 and $p < 0.001$
- IBS-QOL: 54.04 (\pm 10.6) at baseline, 76.20 (\pm 11.20) after three months; t test was 14; $p < 0.001$
- VSI: 44.28 (\pm 10.7) at baseline, 21.18 (\pm 5.30) after three months; t test: 18.8; $p < 0.001$
- FEMQ observe: 21.98 (\pm 4.28) in baseline, 25.19 (\pm 5.26) after three months, t test was 4.5 and $p < 0.001$
- FEMQ describes 25.06 (\pm 4.26) at baseline, 28.26 (\pm 5.26) after three months; the t test was 4.60 and $p < 0.001$.
- FEMQ Act ware: 24.18 (\pm 4.68) at baseline, 28.30 (\pm 5.50) after three months; t test was 5.56 and $p < 0.001$
- FEMQ Non-Judge: 27.12 (\pm 6.18) at baseline, 30.30 (\pm 5.10) after three months; t test was 3.86 and $p < 0.001$
- FEMQ Non-react: 20.96 (\pm 4.30) at baseline, 20.36 (\pm 5.78) after three months; t test was 0.8 and $p > 0.419$ (p value was insignificant).
- HAD depression: 4.28 (\pm 1.22) at baseline, 3.18 (\pm 1.28) after three months; t test was 6.06 and $p < 0.001$
- HAD anxiety: 7.38 (\pm 2.36) at baseline, 4.18 (\pm 2.06) after three months; t test was 9.95; $p < 0.001$
- PCS: 16.18 (\pm 4.02) at baseline, 8.30 (\pm 3.06) after three months; t test: 15.2 and $p < 0.001$
- PHQ-12 – 6.07 (\pm 2.04) at baseline, 3.60 (\pm 1.07) after three months, t test was 10.4 and $p < 0.001$

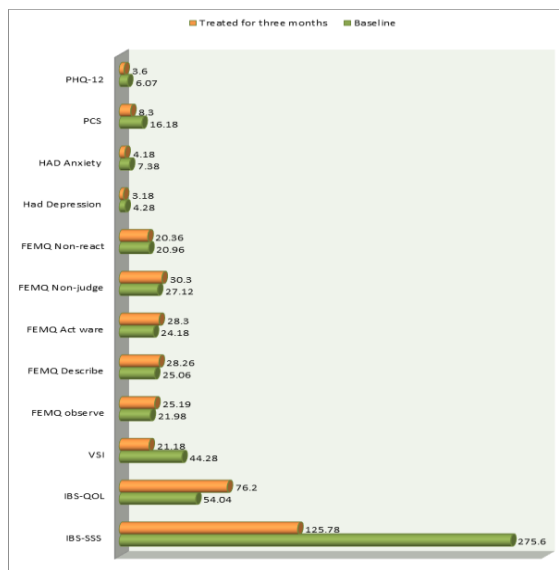


Table 1: Comparison of values of pre and post treatment variables in IRBS patients

Table 1: Five Facet Mindfulness Questionnaires (from Baer. etal)

FFMW scale	Abbreviation	Description	Example Item
Observing	Observe	Noticing or attending to internal or external experience (E.g. sounds, Emotions though bodily sensation)	I notice the smells and aroma of things
Describing	Describe	Labelling internal experiences with words	I am good at finding words to describe my feeling
Acting with Awareness	Act ware	Attending to ones activities of the moment (in contrast to auto pilot)	I find myself doing things without paying attention (R)

Non Judging of inner experience	Non Judge	Accepting one's thought and Emotions without Evaluation (E.g. Good or bad)	I think some of my emotions are bad or in appropriate and I should not feel them (R)
Non-reactivity to inner experience	Non React	Detaching from one's thoughts and emotion; allowing them to come and go without becoming overly identified with them	I perceive my feelings and emotions without having to react to them

R=reverse-scored

Table 2: Comparison of values of pre and post treatment variables in IRBS patients

Variables	Baseline	Treated for three months	t test	p value
IBS-SSS	275.60 (±70.3)	125.78 (± 65.8)	15.1	P<0.001
IBS-QOL	54.04 (±10.6)	76.20 (±11.28)	14	P<0.001
VSI	44.28 (±10.7)	21.18 (±5.30)	18.8	P<0.001
FEMQ observe	21.98 (±4.28)	25.19 (±5.36)	4.5	P<0.001
FEMQ Describe	25.06 (± 4.20)	28.26 (±5.20)	4.60	P<0.001
FEMQ Act ware	24.18 (±4.68)	28.30 (±5.50)	5.56	P<0.001
FEMQ Non-judge	27.12 (±6.18)	30.30 (±5.10)	3.86	P<0.002
FEMQ Non-react	20.96 (±4.30)	20.36 (±5.78)	0.8	p>0.419
Had Depression	4.28 (± 1.22)	3.18 (±1.28)	6.06	P<0.001
HAD Anxiety	7.38 (±2.36)	4.18 (±2.06)	9.95	P<0.001
PCS	16.18 (±4.02)	8.30 (±3.06)	15.2	P<0.001
PHQ-12	6.07 (± 2.04)	3.60 (±1.07)	10.4	P<0.001

Abbreviation: FEMQ – Five Emotional Mindfulness Questionnaires

HAD – Hospital Anxiety and depression scale, IBS-SSS – IBS severity scoring system

PCS – pain catastrophing scale, PHQ-12 – Personal Health questionnaires

VSI – Visceral sensitivity Index

DISCUSSION

Present MBSR study in the North Karnataka population. FFMQ (Five-facet mindfulness questionnaires) of different scales, including observation and describing action with awareness Non-judging of inner experience and non-reactivity to inner experience protocols were applied in the counselling study for three months [Table 1]. In a comparative study of the values of pre- and post-treatment variables in IRBS patients, IBS-SSS, IBS-QOL, VSI, FEMQ observe, FEMQ describe, FEMQ non judge, FEMQ non react, HAD depression, HAD anxiety, PCS, and PHQ-12 had significant p values (p<0.001) except for FEMQ non react [Table 2]. These findings are more or less in agreement with previous studies.^[6-8]

Patients with IBS syndrome have greater activation of brain areas associated with negative emotions, memory retrieval, and attention to sensory stimuli compared to healthy individuals. Quality of life in IBS patients is a multi-complex index, including social relations, job satisfaction, education, sexual activity, and mental conditions. These patients have limited social relationships and suffer from different symptoms of depression, and many have concerns about the nature of their disease.^[9] Treatment through emotion regulation can be beneficial for improving the quality of life and reducing other variables in patients with IBS because of its simultaneous emphasis on emotional insight and clear behavioural guidelines. Establishing psychological distance from aversive emotions may be a part of the reappraisal process, but mindfulness differs from such processes in that it treats the labelling or monitoring of the experience as an end in itself rather than a means by

which to control the emotion.^[10] The treatment of MBSR includes a focus on all emotions instead of suppressing them or avoiding emotional events. It is reported that, in the comparison of MBSR and emotion regulation in reducing experimental avoidance, MBSR is related to understanding and accepting problems and emotion regulation.^[11] MBSR is linked to increased meta-cognitive awareness. The capability to experience thoughts and emotions through a focused approach in which thought and emotions are experienced as mental events and not as an exact reflection of reality. As a result, increased counselling on attention and meta-cognitive awareness leads to changes in tactics employed against internal negative experiences through increased acceptance of thoughts, emotions, and facts of reality.

Limitation of Study: Owing to the tertiary location of the research centre, the small number of patients, and the lack of the latest techniques, we have limited findings and results.

CONCLUSION

In the present study, the counselling of IBS patients with MBSR showed significant improvement. Degrees of improvement are solely dependent on emotional control, acceptance of thoughts and reality, and patience. It will modify the behaviour, and GIT-related neurological factors will gradually return to normal, and there will be remarkable improvement in IBS. The present study demands further genetic, neurological, nutritional, and environmental studies because the exact pathophysiology of IBS is still unclear.

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