

Effectiveness of Compassion-Focused Therapy in Depression, Anxiety, Stress, and Physical Symptoms in Patients With Irritable Bowel Syndrome

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Abstract

Background: Irritable bowel syndrome (IBS) is the most common disorder of the digestive system. Despite the long period of study on the treatment of IBS, only a small number of treatments have proven effective.

Objectives: The current study aimed to determine the efficacy of compassion-focused therapy (CFT) in depression, anxiety, stress, and physical symptoms in patients with IBS.

Methods: This was a quasi-experimental study with a pretest, posttest, follow-up, and control group. The present study was carried out on a total of 30 patients with IBS (diagnosed by a gastroenterologist applying the Rome III criteria) selected and divided into CFT (n=15) and control (n=15) groups. The experimental group received eight sessions of CFT. All groups responded to the Severity of Symptoms of Irritable Bowel Syndrome, and Depression Anxiety Stress Scale-42 was administered as pre-post and follow-up tests.

Results: The results showed significantly lower mean scores in depression, anxiety, stress, and physical symptoms in the experimental group in the posttest. The follow-up test given 8 weeks after the posttest did not show any change in the results.

Conclusion: The obtained findings support the efficacy of CFT in depression, anxiety, stress, and physical symptoms in patients with IBS.

Keywords: *irritable bowel syndrome, compassion-focused therapy, depression, anxiety*

Introduction

Irritable bowel syndrome (IBS) is a functional gastrointestinal disorder, and psychological factors, such as anxiety, play a significant role in its stimulation and exacerbation [1]. The IBS diagnosis is based on symptoms, such as chronic abdominal pain and defecation changes in the absence of any organic cause [2]. The prevalence of IBS is reported to be within the range of 10-15% in North America and about 11.5% in Europe; however, the prevalence varies from country to country [3]. According to a study conducted in Iran, IBS prevalence is reported

within the range of 3.5-5.8% [4]. In two systematic reviews, total direct costs for IBS in the United States and the United Kingdom are estimated at 348 to 8750 USD per patient per year [5] with total annual costs of 45.6 million pounds in the United Kingdom and 1.35 billion USD in the United States [6]. Although several medications offered by physicians have shown their effects on IBS, none has yet been able to provide adequate treatment for the full spectrum of IBS [7,8]. Psychological therapies, such as cognitive-behavioral therapy, relaxation, behavioral therapy, psychotherapy, and hypnosis,

despite their effectiveness, have met with conflicting results [9-11].

Compassion-focused therapy (CFT) is a meta-diagnostic model that uses common frameworks and processes in classical cognitive-behavioral therapy to manage therapy flow. This treatment is based on the current understanding of emotion regulation systems [12]. The CFT emphasizes the relationship between cognitive patterns and these three emotion regulation systems. In this way, they move from the first system to the second and third systems [13]. The main treatment technique is compassionate mind training, is CFT.

In this technique, the client is taught the skills and characteristics of compassion. The CFT helps clinicians change the problematic cognitive and emotional patterns associated with their anxiety, anger, and self-criticism [14]. As a result, by altering brain patterns, the secretion of the hormones oxytocin and dopamine, which will result in improved relationships, reduces the symptoms of anxiety, depression, stress, and the severity of physical symptoms.

Rahmanian et al [15], in a study, examined the effectiveness of CFT in the improvement of psychological disorders (anxiety and depression) and the level of hope and adherence to treatment of patients with rheumatism. The results showed that compassion therapy training has been effective in the improvement of psychological disorders (anxiety and depression), life expectancy, and adherence to treatment for patients with rheumatism. Zarei [16], in another study, investigated the effectiveness of CFT in the treatment of diabetic patients with depression. The treatment results of the experimental group after receiving eight sessions of CFT showed the effectiveness of this treatment in reducing depression and controlling blood sugar levels in diabetic patients.

Considering the similarity of IBS to the other nonstructural disorders of the gastrointestinal tract, the identification of psychological factors is important in the occurrence of symptoms. In this regard, patients with gastrointestinal physiological disorders but without psychological pressures and those with a social support system do not refer to a physician for treatment, and if referred, they are treated with a slight change in lifestyle, nutrition, and reassurance by the physician; nevertheless, patients with few structural gastrointestinal

disorders but psychological stresses without supportive systems respond very poorly to treatment. It is also often affected by psychological problems, such as anxiety and depression. It is associated with a decrease in the quality of life of patients. In addition, the imposed costs of treatment and its recurrence due to psychological problems are considerable. Therefore, psychological intervention for these patients with the help of two efficient and relatively new approaches of reality therapy and compassion therapy seems necessary. This study was conducted in Two groups and only part of the results are in line with the present study's objectives to determine the effectiveness of CFT in depression, anxiety, stress, and physical symptoms in patients with IBS.

Methods

This quasi-experimental study was carried out with a pretest, posttest, follow-up, and control group. The statistical population of the study included all individuals who were referred to the Tehran Center for Gastroenterology and Liver Diseases, Tehran, Iran, due to gastrointestinal problems and were diagnosed with IBS by the gastroenterologists of this center. In this study, among the patients referred to the aforementioned health center, a sample of 30 individuals considering inclusion and exclusion criteria was selected by the available sampling method and allocated randomly to two groups, namely CFT (n=15) and control (n=15) groups. It should be noted that both groups were administered the same drug at the same dose; accordingly, the intervention results would not be tarnished.

The inclusion criteria included moderate IBS according to the Rome III criteria based on the diagnosis of a gastroenterologist (score range: 175-300), literacy for reading and writing to fill out questionnaires, age range within 20-55 years, conscious consent to participate in the study, organic gastrointestinal disorders approved by a gastroenterologist, and no acute physical illness and psychological disorder under psychiatric treatment. The exclusion criteria were the absence of more than two in the training sessions and the unwillingness to cooperate.

Ethical Considerations

All individuals received written information about the research and voluntarily participated in the

study. The participants were assured that all information would remain confidential and be used for research purposes. The names and surnames of the participants were not registered to protect privacy. The researcher also undertook to implement this intervention for the control group after the end of the research to observe the ethical principles.

The Irritable Bowel Syndrome Symptom Index was developed by Francis, Morris, and Horoll and consists of five sections that examine the symptoms of IBS, including pain, defecation disorders, bloating, disease effects on daily activities, and extraintestinal symptoms on an intensity scale [17]. The average score of each section is 100, and the total score of the questionnaire is 500. Mild, moderate, and severe cases are displayed with score ranges of 75-175, 175-300, and higher than 300, respectively. The internal correlation coefficient and Cronbach's alpha of the scale are 0.86 and 0.69, respectively [17].

The Depression Anxiety Stress Scale-42 (DASS-42) was developed by Lavibond and Lavibond [18]. The main form of this questionnaire has 42 items, and each of the psychological structures of stress, anxiety, and depression are evaluated by 14 different items. The three factors of anxiety, depression, and stress are measured by the DASS-42. The stress on this scale indicates physical and mental stress. Based on the evidence, this

questionnaire has adequate validity for application in research, diagnostic, and screening activities. The three-factor structure of DASS scales has been supported in various studies. Furthermore, different studies have shown that the DASS has desirable psychometric properties. The DASS-42 has the diagnostic and screening aspects of stress, anxiety, and depression symptoms during the past week. This scale is designed for adults and should be used for individuals older than 15 years. Answering the items is in the form of four options that are completed in the form of self-assessment. The validity and reliability of the test have been studied by Asghari Moghadam in Iran. Moreover, the scales of depression, anxiety, and stress with the necessary conditions for application in psychological research and clinical situations with Iranians have been identified [19].

The compassion-focused training intervention was performed by a trained and specialized psychologist (with a PhD degree) with at least 10 years of clinical experience. Compassion-focused training is a treatment plan consisting of eight 90-minute training sessions based on the Gilbert training package [20]. The training sessions were held in the counseling center weekly. The duration of each session was 90 minutes. The posttest was performed at the end of the eighth session and the follow-up period 2 months after the end of the posttest.

Table 1: Training Sessions of Compassion-Focused Therapy

Session	Content
Session 1	Teaching the theoretical foundations of compassion-focused therapy in simple words in the context of psychological problems of patients with irritable bowel syndrome
Session 2	Teaching the nature of compassion to clients, training the mind focused on threats versus the compassionate mind (with emphasis on the unique problems of clients), teaching compassionate qualities, and teaching compassionate skills
Session 3	Preparing and training the individual mentality
Session 4	Relationships
Session 5	Introducing the illustration model
Session 6	Illustrating a safe place
Session 7	Growing compassionate
Session 8	Compassion

Descriptive statistical methods (e.g., mean and standard deviation) and inferential statistical methods (e.g., mixed analysis of variance with repeated measures) were used to analyze the data.

Results

The mean age values of the experimental and control groups were 36.53 ± 7.19 and 37.86 ± 8.26 years, respectively ($P > 0.05$). Table 2 shows the demographic characteristics of the sample group.

Table 2: Demographic Characteristics of the Sample Group

Groups		Experimental (n=15)	Control (n=15)	P-value
Gender	Female	9	8	0.78
	Male	6	7	
Age (year)	20-30	6	5	0.69
	31-40	6	7	
	41-50	3	3	
Education	High School	5	4	0.83
	B.A.	6	5	
	M.A. and higher	4	6	

Before repeatedly measuring the variance analysis, the results of the Shapiro-Wilk test, Box's M test, Mauchly's test of sphericity, and Levene's test were evaluated for observing the assumptions. Since the Shapiro-Wilk test, Box's M test, Mauchly's test of sphericity, and Levene's test were not significant for any of the research variables, the condition of normality of the data and the condition of parity of intergroup variances were not rejected.

between them. As observed in Table 4, analysis of variance is significant for the intragroup factor of

physical symptoms (time) and between groups. However, the interaction of group effect and time was also significant ($F=6.38$, $df=4$). According to the above-mentioned findings, the main hypothesis of the study was confirmed, and the effectiveness of CFT in the physical symptoms of patients with IBS was significant, compared to the control group.

Table 3 shows the results of the analysis of variance of the main effects and the interaction.

Table 3: Descriptive Characteristics of Variables by Group and Test Frequency

Variable	Pretest		Posttest		Follow-up		Period	P-value	Eta	
	M	SD	M	SD	M	SD				
Depression	CFT*	25.60	9.36	10.93	3.37	12.87	3.11	Time	0.001	0.54
	Control	30.33	7.94	27.40	9.66	25.07	6.69	Time*Group	0.001	0.54
								Group	0.001	0.64
Anxiety	CFT*	25.87	9.39	8.87	2.50	10.73	2.58	Time	0.001	0.45
	Control	26.13	10.80	27.47	10.18	22.20	9.77	Time*Group	0.001	0.27
								Group	0.001	0.55
Stress	CFT*	35.27	7.81	14.20	3.36	16.33	3.48	Time	0.001	0.74
	Control	33.00	7.11	31.80	6.73	28.13	6.66	Time*Group	0.001	0.49
								Group	0.001	0.55
Physical symptoms	CFT*	268.20	67.56	165.13	55.96	185.27	60.71	Time	0.001	0.16
	Control	246.33	68.70	307.73	77.28	284.33	77.89	Time*Group	0.001	0.23
								Group	0.001	0.38

*Compassion-focused therapy

M, mean; SD, standard deviation

Discussion

The results showed that CFT significantly reduced the mean scores of physical symptoms in patients with IBS, and this decrease continued in the follow-up phase. These findings are consistent with the results of studies by Seyed Jafari [21] and Naliboff [22]. Moreover, in examining other hypotheses focusing on psychological symptoms,

based on the results, CFT significantly reduced the mean scores of depression, anxiety, and stress in patients with IBS. This decrease continued in the follow-up phase. These findings are consistent with the results of studies by Xiao [23], Pashing [24], Khalifeh Soltani [25], and Jalalinia [26]. In explaining the effectiveness of CFT in the physical and psychological symptoms of patients

with IBS, it can be said that problematic cognitive and emotional patterns associated with anger and self-criticism can activate the threat and self-protection system followed by depression, anxiety, stress, and physical symptoms. In this approach, by employing techniques, such as CFT and cognitive behavioral therapy, patients are taught to effectively manage their emotional system and respond more appropriately to situations. As a result, as the patient progresses from the threat and the self-protection system against danger to the incentive and the resource-seeking system, the symptoms of the disorders decrease with changes in brain patterns. It will also be helpful when these patients are helped to understand that there are multiple emotions and conflicts in any distressing mental state [14].

In explaining the effectiveness of CFT in depression in patients with IBS, it can be said that in this approach and techniques, such as compassionate mind training and cognitive behavioral therapy, patients are taught to effectively manage their emotional system and respond more appropriately to situations and conditions. As a result, as the patient moves from the threat system and self-protection against danger to the derive system and the relief system, with changes in brain patterns, depression symptoms also decrease. Furthermore, when these patients are helped to understand that there are multiple emotions and conflicts in any uncomfortable mental situation, it will be useful.

In explaining the effectiveness of CFT in anxiety in patients with IBS, it can be said that in this approach, problematic emotions, such as anxiety, persist because there is an internal feedback loop between the content and concentration of an individual's thoughts and the threat system. It is worth noting that the threat system is designed for quick actions and not for complex thinking. This is why CFT suggests trying to shift toward another emotional system to facilitate new processing. In such a context, CFT helps reduce anxiety by getting rid of internal stimuli, such as rumination, self-criticism, or anger, focusing on compassionate insights and feelings, empowering the individual to move compassionately away from inner emotional storms, and empowering to observe and watch emotions and thoughts as they occur, not to be caught by them.

In explaining the effectiveness of CFT in stress in patients with IBS, it should be noted that individuals are helped to consider some of their unpleasant feelings and actions as normal in this approach. Some individuals have stressful lives or have experienced tragedies and losses that have caused them sadness or mourning. Individuals can exacerbate threat-based emotions in the way they think about things or all kinds of avoidances. However, it is important to help them face these feelings and actions with compassion. A compassionate state of mind organizes our minds in different ways. Therefore, compassionate attention, compassionate behavior, compassionate feelings, and compassionate imagination are quite different from threat-focused types. Helping patients understand the difference between a mind focused on threat and a compassionate mind is helpful for them. As a part of the treatment, by helping these individuals to understand when to enter a state of mind focused on threats and ruminate about them, they learn to pay attention to any changes in the focus, physical emotions, thoughts, and impulses, and then deliberately act to focus and activate a compassionate mind.

Conclusion

The findings of this study support the efficacy of CFT in depression, anxiety, stress, and physical symptoms in patients with IBS. One of the limitations of the present study was that patients with IBS used medications prescribed by a physician. It is suggested to carry out the present study with drug control and take ethical considerations into account and compare its effectiveness. Moreover, due to the effectiveness of CFT in the physical symptoms of patients with IBS, gastroenterologists are recommended to refer such patients to health psychologists in addition to prescribing medication (using the results of this research) to experience more effective treatment. It is suggested to add a psychologist to the treatment team of patients with digestive problems.

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Conflict of interest

The authors have no conflicts of interest to declare.

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