

Effectiveness of Analytical Group Therapy in Perceived Stress, Severity of Gastrointestinal Symptoms, and Perfectionism among Patients with Irritable Bowel Syndrome

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Abstract

Background: Irritable bowel syndrome (IBS) is a chronic gastrointestinal dysfunction. Patients experience abdominal pain and different intestinal symptoms in the absence of any structural or biological abnormalities.

Objectives: This study aimed to investigate the effectiveness of an analytical treatment group on perceived stress, the severity of gastrointestinal symptoms, and perfectionism in patients with IBS.

Methods: A pretest-posttest design with follow-up and a control group was used in this semi-experimental investigation. Patients with IBS who were referred to medical centers in Tehran, Iran, during 2019 were included in the study's statistical population, with 68 patients chosen using a convenience sampling method. Among them, 20 patients were assigned to analytical therapy (n=10) and the control groups (n=10) using a simple random sampling method. The required data were selected using the perceived stress scale, multidimensional perfectionism scale, and IBS symptom severity index. The data was analyzed using the repeated measures analysis of variance in SPSS software (version 22).

Results: The results showed that analytical group therapy significantly reduced perceived stress ($P<0.001$), perfectionism ($P<0.001$), and severity of gastrointestinal symptoms ($P<0.001$) in patients with IBS.

Conclusion: It can be concluded that analytical group therapy is effective in perceived stress, perfectionism, and severity of symptoms of IBS; moreover, analytical group therapy can be used to reduce the problems of patients with IBS.

Keywords: Gastrointestinal Diseases, Irritable Bowel Syndrome, Perfectionism, Psychotherapy.

Introduction

Irritable bowel syndrome (IBS) is a chronic gastrointestinal dysfunction. Patients experience abdominal pain and different intestinal symptoms in the absence of any structural or biological abnormalities. Symptoms of this syndrome may be associated with diarrhea, constipation, or a combination of both (1). The global prevalence of IBS is estimated to be about 11%, and the corresponding value of this syndrome has been reported between 1.1% and 25% in Iran. However, a study has recently revealed a 21.5% prevalence of IBS in Iran (2). This syndrome affects both genders at different ages although its prevalence in women is higher due to the role of sex hormones in IBS (3).

In addition, many behavioral sciences researchers, physicians, and psychiatrists have investigated and confirmed the vulnerability of perfectionists to psychosomatic diseases. Hard conscience, anxiety, guilt, self-restraint, self-dissatisfaction, and hatred are common emotional characteristics that can be observed in most patients with intestinal symptoms (4). All human beings tend to be perfect and

prosperous. Humans are trying to grow and transcend what they are by actually realizing their potential. At first, perfectionism was considered an inefficient feature in which the desperate need for progress in the form of high and unrealistic personal criteria manifests itself and creates a situation where fear of mistake is at the center (5). Perfectionist and unrealized personal criteria impose self-confidence and helplessness on the individual through increasing experiences of failure and consequently increase the readiness to experience anxiety and stress (6).

Among people with IBS, they have reported important symptoms of psychological disorders and psychological disturbances, and in reciprocity, people with mental disorders, such as anxiety disorders and panic attacks, have reported gastrointestinal symptoms consistent with IBS. It is assumed that psychological disturbances may play an important role in initiating or exacerbating gastrointestinal symptoms following IBS (7).

One of the emphases of psychoanalytic therapy is the therapist's continuous quest for deep emotional experience as a healing element (8). Extensive studies

over the past two decades have shown that disclosure, speech, or writing improves physical and mental health as well as the functioning of the immune system and autonomous nerves (9). The active position of the therapist and the proper use of techniques in this position cause the clients to identify and touch the depth of their feelings and thoughts and gain more mental health (10). In this treatment, the patient is helped to solve his/her problems based on how s/he encounters emotions or conflicts. These conflicts and emotions are the product of primary losses and damages in life. When these emotions are activated by a current stressful event, anxiety and defenses are mobilized. The result is the combination of anxiety, somatization, depression, avoidance of self-defeating patterns, and interpersonal problems (11). Given the growing number of patients with IBS and their primary issues in the areas of perceived stress, intensity of gastrointestinal symptoms, and perfectionism, it appears that many of these patients lack the knowledge and skills necessary to effectively handle such issues that can be reduced in the case of psychoanalysis for patients.

Objectives

This study aimed to investigate the effectiveness of an analytical therapy in perceived stress, the severity of gastrointestinal symptoms, and perfectionism in people with IBS.

Methods

This semi-experimental study was conducted using a pretest-posttest design with follow-up and a control group. The statistical population of the study included patients with IBS referred to medical centers in Tehran, Iran, during 2019. In total, 68 IBS patients were referred to medical centers in Tehran, Iran, where they qualified and volunteered to take part in the study. Following that, using a simple random sample procedure, 20 patients were randomly assigned to two groups of analytical therapy ($n=10$) and control ($n=10$). Based on the effect size= 0.40 , $=0.95$, $1-(\text{err prob})=0.80$ test power, and 10% loss for each group, the required sample size was calculated to be 10 cases. They entered the trial after checking the physician's and the patient's medical records about IBS. The pretest was given to the members of the two groups before the sessions began and informed consent was obtained from them. The analytical group therapy was held in two three-month periods with a one-week interval between the two periods. In total, 12 sessions were held every three months with a total of 24 sessions considered. There were no drop outs among the two groups, and all subjects were present until the end of the sessions.

In terms of ethical considerations, all participants were given written information regarding the

research technique and objectives, as well as the fact that the study was voluntary. Furthermore, they were assured of the privacy and confidentiality of their data, which was only utilized for research purposes. The following criteria were used to determine eligibility: 1) a history of IBS confirmed by a gastroenterologist for at least one year, 2) a minimum age of 20 years, 3) a minimum secondary education, and 4) no psychological treatment since the disease's diagnosis. Patients with serious IBS consequences that result in hospitalization, as well as those who missed more than two interventional sessions, were excluded from the trial. The subjects of the groups completed the research questionnaires again after the sessions ended, and the questionnaires were re-administered two months after the completion of the psychotherapy period.

The content of the sessions was based on inter-subject psychotherapy (12) (i.e., the seven stages of questioning about problems, pressure, challenge, transitional resistance, direct access to the unconscious, transfer analysis, and dynamic reduction in the unconscious).

Perceived Stress Scale:

This scale designed by Cohen, Kamarck, and Mermelstein in 1983 is one of the global measures of perceived stress. The perceived stress scale consists of forms 4, 10, and 14 which are used in this study. The items are rated on a five-point Likert scale of no (0) to very high (4) within the score range from 0 to 56. The high scores on this scale indicate high levels of stress (13). Cohen et al. (13) reported the reliability of the retest of this scale to be 0.85. Furthermore, the test's internal consistency was calculated to be between 0.84 and 0.86. In addition, using Cronbach's alpha, the reliability of the Persian version of this questionnaire was estimated to be 0.78. (14). In this study, Cronbach's alpha was used to measure the questionnaire's reliability, which was found to be 0.84.

Multidimensional Perfectionism Scale

Multidimensional perfectionism scale (MPS) was used to measure perfectionism. This scale consists of three subscales of 15 items that measure self-employed perfectionism, other perfectionism, and society's perfectionism. Subjects showed their agreeable rate based on a five-point Likert scale, and higher scores indicated higher perfectionism. Several studies have supported the multidimensional validity and reliability of the MPS scale in clinical populations, students, and the general public (15). The amplitude of alpha coefficients for this scale was reported between 0.74 and 0.89, and the subscales were correlated with structures that were theoretically similar and were not affected by response biases. The reliability of the MPS was obtained using internal consistency (Cronbach's alpha) in this study. The self-reliant and community-speaking perfectionism

subscales had alpha coefficients of 0.79 and 0.70, respectively, demonstrating inner consistency above the factor. Cronbach's alpha was used to determine the questionnaire's reliability, which was 0.76 in this study.

Irritable Bowel Syndrome Severity Index

This tool includes five questions that examine IBS symptoms, such as pain, temperamental habit disorder, bloating, the effect of the disease on daily living activities, and gastrointestinal symptoms. The mean score of each section is a maximum of 100, and the total score of the questionnaire is a maximum of 500. Mild, moderate, and severe cases are displayed by scores of 75-175, 175-300, and more than 300, respectively. Despite the fact that none of the IBS

symptom severity measures have been thoroughly validated, this scale is now the most widely utilized instrument in similar

investigations (16). Cronbach's alpha was used to measure the questionnaire's reliability, which was found to be 0.80 in this study.

The data were analyzed using descriptive statistics (mean±SD) and repeated measures analysis of variance in SPSS software (version 2).

Results

The experimental and control groups had mean±SD ages of 43.20±9.39 and 42±8.1, respectively. In terms of age, there was no statistically significant difference between the two groups ($P=0.624$).

Table 1. Mean±SD of research variables in the experimental and control groups

Variables	Group	Pre-test		Post-test		Follow-up	
		M	SD	M	SD	M	SD
Perceived stress	Intervention	32.33	9.23	28.73	6.27	28.33	6.54
	Control	31.73	8.49	31.20	8.26	30.80	7.20
Severity of gastrointestinal symptoms	Intervention	37.00	3.81	32.66	3.95	31.93	3.69
	Control	37.60	4.13	37.26	4.00	37.46	3.96
Perfectionism	Intervention	45.40	6.00	37.11	5.36	39.40	5.94
	Control	44.53	5.70	44.00	5.59	43.46	4.77

The analysis of variance with repeated measures was used to evaluate the significant difference in perceived stress levels between the analytical therapy and control groups. In this study, the findings of the M box, Mauchly's sphericity, and Levene's tests were reviewed before repeating measuring variance analysis. The variance-covariance matrix's homogeneity requirement was properly observed because the M box test was not significant for any of the research variables. Furthermore, the lack of significance of any of the variables in Levene's test

demonstrated that the condition of intergroup variance equality was observed, and the variance of dependent variable error was equal in all groups. Finally, Mauchly's sphericity test findings revealed that this test was also utilized for the felt stress variable. It was significant, and hence the spherical assumption (Mauchly's $W=0.63$, $df=2$, $P=0.0001$) was not observed (Mauchly's $W=0.63$, $df=2$, $P=0.0001$). As a result, the Greenhouse Geisser test was employed to assess the univariate test results for intra-group effects and interactions.

Table 2. ANOVA with repeated measures was used to compare experimental and control groups at pre-test, post-test, and follow-up.

Variable	Source	SS	Df	MS	F	P	Eta
Perceived stress	Time	67.28	1.46	46.46	160.63	0.001	0.85
	Time*Group	47.02	1.46	32.21	111.36	0.001	0.79
	Group	46.94	1	46.94	9.99	0.004	0.26
The severity of gastrointestinal symptoms	Time	446.06	1.36	329.75	155.08	0.001	0.84
	Time*Group	356.06	1.35	263.22	123.79	0.001	0.81
	Group	291.60	1	291.60	5.38	0.001	0.15
Perfectionism	Time	185.08	1.38	133.96	124.71	0.001	0.81
	Time*Group	106.02	1.38	76.73	71.43	0.001	0.71
	Group	263.51	1	263.51	11.87	0.001	0.25

As can be observed in Table 2, the analysis of variance is significant for intergroup factor (time). Moreover, these results reveal the significance of time and group effect, as well as group and time

interaction.

Discussion

This study aimed to investigate the effectiveness

of an analytical therapy in perceived stress, the severity of gastrointestinal symptoms, and perfectionism among patients with IBS. Based on the findings, it can be noted that analytical group therapy has an effect on perceived stress in people with IBS. The results of this study are congruent with the findings of the studies conducted by Foulkes (12) and Frosh's (18).

Regarding the explanation of this finding, it can be said that several pieces of evidence confirm the role of psychological variables, such as anxiety, depression, stress, coping styles, type of disease perception, and the effect of patient beliefs on the persistence and severity of IBS symptoms. There is a connection between psychological stress and physiological responses of the gastrointestinal tract. The intestinal nervous system is extremely sensitive to emotional states; accordingly, motor function decreases in acute stress in the small intestine and increases in the large intestine, which may be responsible for the intestinal symptoms of IBS (19). During stress, a series of fearful cognitive responses arise that make this misconception about the concept of symptoms more common among patients with concerns about IBS (20). To explain the effectiveness of analytical psychotherapy in perceived stress among people with IBS, it can be said that the process of analytical group therapy focuses on deconstructing, analyzing, discussing, and interpreting past experiences and working on defenses and resistances. It affects people's subconscious. Clients need to rebuild their past and work on their repressed conflicts to become aware of the extent to which the subconscious has an impact on their current lives (21). Analytical group therapy is usually a purposeful and long-term process. All therapists believe in the psychoanalytic approach, believing that the process of analyzing and interpreting core emotions is the main treatment because the goal is to gain insight and change personality.

Based on the findings, it can be observed that analytical group therapy affects the severity of gastrointestinal symptoms in people with IBS. This conclusion can be explained by stating that the body and mind, as well as their relationship, have been discussed (22). According to research, the incidence of psychological and psychiatric illnesses in patients with IBS, as well as psychological and psychosocial variables, have a key role in the development and persistence of symptoms of this condition. Nevertheless, relationship therapy is one of the most important topics in treatment. However, analytical group therapy, unlike the classical model, which is based on psychoanalysis, is being isolated and passive. Today there is a strong emphasis on therapeutic alliance and relationships based on dialogue, interest, respect, and importance (23). The creation of such a therapeutic environment is not

considered a disruptive factor for the transmission process, and reciprocal transmission is still considered the basis for psychoanalytic therapy. He believes that transition is a complex phenomenon that will occur in any case as a result of intra-group interactions (24). What is important from a psychoanalytic point of view is the assumption that many of the disorders are the painful product of early life, childhood trauma, lack of guilt, failure to use defense mechanisms, and severe emotional inhibition. In other words, researchers of this view believe that people who suffer from early life conflicts, for whatever reason, do not forget such memories. However, they use them through defense mechanisms, including repression, which were sent to the unconscious part of the mind. This suppression disrupts the natural process of growth, and as a result, causes many pathological symptoms (25).

Therefore, psychoanalysts believe that if people gain insight into their painful childhood experiences in therapy sessions, their pathological defense mechanisms are rebuilt, they learn the right way to vent their emotions, they can express their thoughts and feelings freely; moreover, they will gain insight into the role of their accumulated anger, their psychological problems will be reduced, and as a result, they will have better social relationships with others.

Based on the findings, it can be observed that analytical group therapy has an effect on perfectionism in people with IBS. In explaining this finding, it can be said that perfectionism is a set of very high criteria for performance that is accompanied by extreme critical self-evaluations. Perfectionists believe that this perfect result can be achieved with effort, whereas complete and flawless results are unattainable, and attempts to achieve them lead to cognitive inflexibility and psychological damage (26). Therefore, it can be expected that analytical group therapy by working on the main conflicts will lead to the improvement of patients' perfectionism. One of the main aspects of the group psychoanalytic approach is working on the main and underlying issues, as well as conflicts. If we want to change the aspects of members' personalities, we must work on old resistances and patterns of behavior. According to Bowen, after discovering the dynamics and signs, the leader presents a plan to address these signs. These authors consider the change and progress of the members as the result of the efforts and cooperation between the leader and the members in the field of implementing a flexible and thought-provoking treatment plan. It is noteworthy that early conflicts are rarely reviewed. Over time, most people will have to re-examine the deep roots of the problem. Therefore, working forward as a technique to rid people of archetypes is no more than a mistake. The main task of the group leader is to work on the transfers that take place to

the leader or other members. The expression of the transfer and working on it must be performed with great care and without creating resistance in the authorities (27). As intra-group interactions increase, the leader identifies, analyzes, and interprets members' subconscious motives.

The present study also had some limitations, some of which can be mentioned. The subjects might be affected by the test conditions due to multiple answers to one questionnaire (pretest, posttest, and follow-up), and as a result, their accuracy in responding had been reduced. The therapist was one person to perform both models and there may have been an intervention effect. It is suggested that future research examine the effect of these therapeutic approaches on other psychological problems of patients with IBS, such as anxiety, emotion regulation, and adjustment. It is recommended to introduce training based on individual psychoanalysis and analytical group therapy to therapists and counselors of medical centers for people with IBS. Accordingly, they can use these therapies or introduce them to people with IBS to improve the psychological condition of these patients and take practical steps. Due to the cost-effectiveness, importance, and harmlessness of individual psychoanalytic counseling methods and analytical group therapy, workshops with the aim of teaching skills and techniques are recommended for patients with IBS. The basic principles of these two counseling methods should be held.

Conclusion

It can be inferred that analytical group therapy is beneficial in reducing perceived stress, perfectionism, and the severity of IBS symptoms; moreover, analytical group therapy can be utilized to help patients with IBS.

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