

# The effectiveness of rational-emotional-behavioral group therapy on experiential avoidance and emotional expression in patients with irritable bowel syndrome

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## Abstract

**Background:** Functional gastrointestinal disorders are a class of medical patients that are characterized by unknown causes, questionable diagnostic queens, long-term and unpredictable periods of sickness, and possible drug effects.

**Objectives:** The goal of this study was to see if rational-emotional-behavioral group therapy could help patients with irritable bowel syndrome with experience avoidance and emotional expression.

**Methods:** The current study was a semi-experimental study with a control group and pre-test, post-test, and follow-up. All patients with irritable bowel syndrome referred to medical centers in Babol in 2019 were included in the statistical population of this study, and 30 patients with irritable bowel syndrome volunteered to participate in the study and were randomly assigned to two experimental groups (n=15) and a control group (n=15). Data were obtained using Peacock and Long Questionnaire (1990), Bund et al. Experiential Avoidance Questionnaire (2007), and King's and Owens' Emotional Expression Questionnaire (1990) in the pre-test, post-test, and follow-up stages. The rational-emotional-behavioral group training protocol was performed in 12 sessions (one session per week) for 90 minutes. Data were analyzed using repeated measure analysis of variance method and the above statistical analysis was performed using SPSS.22 software. The significance level of the tests was considered 0.05.

**Results:** The results showed that rational, emotional-behavioral therapy was effective on decreasing experiential avoidance ( $P<0.001$ ) and increasing emotional expression ( $P<0.001$ ) in patients with irritable bowel syndrome.

**Conclusion:** It can be said that rational-emotional-behavioral group therapy was effective on experiential avoidance and emotional expression in patients with irritable bowel syndrome. Rational-emotional-behavioral group therapy can be used to reduce psychological problems in patients with irritable bowel syndrome.

**Keywords:** Irritable Bowel Syndrome, Psychotherapy, Emotions, Behavior Therapy.

## Introduction

Functional gastrointestinal disorders are a class of medical patients that are characterized by unknown causes, questionable diagnostic queens, long-term and unpredictable periods of sickness, and possible drug effects. Physicians and gastroenterologists are always challenged with patients who have non-specific complaints such as nausea, vomiting, abdominal pain, diarrhea, and constipation that do not have anatomically apparent justification. 70% of these patients report more pain and 40% more desperation compared to patients with structural gastrointestinal disorders (1). Functional intestinal disorders are a broad subset of functional digestive disorders whose symptoms cannot be explained by structural and biological-chemical abnormalities (2).

Stress (threat, challenge, and resources) is also one of the issues that are effective in nurses' mental health (3). This model states that people who have

undesirables do not see the adverse event occurring limited to the past time and this makes it more likely that this malfunction will continue (4). Based on the exchangeable paradigm of stress assessment, people's response to stressors is based on cognitive assessments of that stress (5). In, the two processes are distinguished from each other. The initial assessment refers to the individual's perceptions of the nature of the situation and its potential threats and secondary assessment of the individual's perceptions of their resources and skills in coping with the situation. The desired perceptions contribute to determining whether a person assesses the demands of the situation within the scope of their resources. In addition, these perceptions have a strong effect on the type of emotions experienced by individuals (6).

The performance of experiential avoidance is controlling or minimizing the impact of disturbing

experiences and can create immediate and short-term relaxation (7), daily stresses in dealing with patients and problems caused by their illness can lead to various psychological problems in nurses such as experiential avoidance (8). Experience avoidance is a process involving negative assessments of unwanted senses, feelings, and private thoughts, and unwillingness to experience these private events, and deliberate attempts to control or evade them (9). Nurses use experiential avoidance to avoid painful experiences. This construct has two parts: reluctance to make contact with personal experiences (body sensitivities, emotions, thoughts, memories, and behavioral contexts) and trying to avoid painful experiences or events that call those experiences. Based on the obtained results, experienced avoidance is a strong predictor of psychological symptoms and its symptoms. This factor can play an important role in the development and continuation of psychological disorders. Studies have shown that high experienced avoidance is related to psychological disturbances such as anxiety and burnout (10).

Emotional expression is one of the most prominent areas that is affected by irritable bowel syndrome and has been less considered. Emotional expression as a main component refers to the external representation of emotion, regardless of value (female or negative) or method (face, verbal and behavioral) (11). Emotional expressions lead to potentially visible superficial changes in face, voice, body, and activity level (12). Studies have shown that being able to express themselves emotionally makes it easy for them to face life challenges and thus makes them more mentally healthy (13). People who are capable of emotional expression recognize their feelings, understand their implicit concepts, and more effectively express their emotional states to others. Compared to those who cannot express emotions, they are more successful in coping with negative experiences and show more appropriate adaptation to the environment and others (14).

So far, several psychological interventions have been performed to solve the psychological problems of people with irritable bowel syndrome. One of these interventions that can be widely used is rational-emotional-behavioral education (15). Rational-emotional-behavioral therapy provided by Albert Ellis is the basic assumption that how people interpret events and life situations plays an essential role in their psychological problems, in this approach it is believed that cognition, emotion, and behavior interact significantly and affect each other (16). Another assumption of this approach is that our emotions are affluent by our beliefs, evaluation, interpretation, and reactions to life situations. Through the treatment process in this approach, clients are taught skills through which irrational beliefs are identified and countered. These skills are adapted and continued through self-actuality. Clients

learn to move ineffective methods of thinking with effective, efficient, and rational knowledge and consequently change their emotional reactions to situations (17). In rational-emotional-behavioral therapy education, it is believed that human beings, as they are inherently inclined towards rational and healthy thinking, are also inclined towards incorrect and irrational thoughts and these thoughts are the root of emotional disturbances (18).

## Objectives

The goal of this study was to see if rational-emotional-behavioral group therapy could help patients with irritable bowel syndrome with experience avoidance and emotional expression.

## Methods

The current study was a semi-experimental study with a control group and pre-test, post-test, and follow-up. All patients with irritable bowel syndrome referred to medical centers in Babol in 2019 were included in the statistical population of this study, and 30 patients with irritable bowel syndrome volunteered to participate in the study and were randomly assigned to two experimental groups (n=15) and a control group (n=15). For each group of 15 participants, the number of samples was determined using similar studies with an effect size of 0.40, a confidence level of 0.95, a test power of 0.80, and a loss rate of 10%. (19). Inclusion criteria are: age range of 30-50 years, having at least 5 years of work experience, lack of experience in rational-emotional-behavioral group therapy workshop, no history of mental disorders, and specific and chronic physical illnesses. Non-compliance with group norms mentioned in the first session, as well as absence from more than two sessions, were used as exclusion criteria. Ethical considerations of the present study included: 1- Before starting work, participants received written consent. 2- Before starting the work, the participant (volunteer) was informed about the subject and method of the study. 3. The private and personal information of the candidates will be protected. 4- The results were interpreted for them if they wished. 5- In case of any disturbances, the necessary guidance for follow-up was provided to the volunteers. 6- Participation in the research did not cause any financial burden for the participants. 7- This research is not inconsistent with the religious and cultural standards of subjects and society.

After obtaining the necessary permissions and referring to the medical centers of Babol, among the patients with irritable bowel syndrome, the inclusion criteria were applied to them and tended to participate in the study. First, the questionnaires of variables were administered to patients with irritable bowel syndrome, and then out of 100 patients with irritable bowel syndrome volunteering to participate in the study, 30 patients were selected available and

randomly assigned to experimental and control groups. In the next step, which was the pre-test, questionnaires were given to the subjects to measure, experiential avoidance and emotional expression. Eight group training sessions were performed once a week for 90 minutes. After completing the training sessions, the subjects of both groups were evaluated again in terms of the dependent variable as post-test. Finally, the data obtained from pre-test and post-test were analyzed. Two months after the end of the sessions, follow-up performed on both groups and with its underlying theory, is developed to measure psychological flexibility, especially concerning experienced avoidance and willingness to engage in action despite unwanted thoughts and feelings, and is scored based on the level of agreement on a 7-degree Likert scale (from never to 7= always true). Higher scores on this scale indicate higher experience avoidance. Bund et al. found that the 10-item version of this questionnaire had good reliability and internal stability and reported the reliability of this scale by retesting method within 12 months of 0.84, and also reported the simultaneous validity of this scale by examining its relationship with the appropriate Depression, Anxiety and Stress (DASS) approx. (20). Ghasemi et al. confirmed the reliability of this scale by Cronbach's alpha method equal to 0.72 and its content and face validity. The reliability of this questionnaire was reported in Ghasemi et al. using Cronbach's alpha 0.80 (21).

King and Emmons Emotional Expression Questionnaire (1990): This 16-item questionnaire

research questionnaires were measured and recorded. Then, the scores obtained by pre-test and post-test as well as the scores of the follow-up session were analyzed to investigate the effectiveness of independent variables in the groups.

Admission and Practice Questionnaire-Version 2 (Bund et al., 2007): This questionnaire was developed by Bund et al. in 2011 and is a 10-question version of the original inquiry (AAQ-I) (20). This questionnaire, in line

was developed by King and Emmons to investigate the role of the importance of emotional expression in health in 1990 (22). The questionnaire measures three scales of positive emotion (7 questions), negative emotion (4 questions), and intimacy (5 questions). The emotion expression questionnaire has 16 materials and three subscales. Materials 1-7 are related to the subscale of positive emotion expression, articles 8 to 12 of which are related to the subscale of intimacy instrument, and its materials 13 to 16 are related to the subscale of negative emotion expression. A higher score on this scale indicates a higher expression of excitement. King and Emmons reported the reliability of this scale by Cronbach's alpha method equal to 0.80 and its converging validity by investigating its relationship with the Bradburn Positive Affect Scale (22). Also, in sharifinia and colleagues, the validity of this scale was reported by Cronbach's alpha method for the whole scale and its subscales with 0.68, 0.65, 0.59, and 0.68, respectively (23).

**Table 1. Content of rational emotional behavior therapy**

Session	Aim
<b>First</b>	Building connections and gaining trust, general understanding of the logic of Ellis's approach
<b>Second</b>	Introducing the main concepts of Ellis's approach and presenting the ABCD model
<b>Third</b>	Creating awareness of how beliefs are formed
<b>Fourth</b>	Understanding logical errors and wrong beliefs
<b>Fifth</b>	Learning how to recognize and control hopeless, pessimistic, dysfunctional thoughts
<b>Sixth</b>	Changing and eliminating false beliefs and replacing beliefs and understanding correctly according to ABCD model
<b>Seventh</b>	Detect unpleasant emotions and change them
<b>Eighth</b>	Working on dysfunctional behaviors in order to change them according to the ABCD model
<b>Ninth</b>	Teaching problem solving method
<b>Tenth</b>	Presenting programs to sustain achievements

Central indices and dispersions such as mean and standard deviation were utilized to describe the data, and variance analysis with repeated measurements test was performed to analyze the data. SPSS.22 was used to conduct the given statistical analysis. The tests were given a significance level of 0.05.

## Results

The mean±SD of age in the experimental group was 44.11±9.53 and in the control group was 42.85±9.94. There was no difference between the two groups in terms of age.

**Table 2- Descriptive indicators of research variables scores in experimental and control groups**

Variables	Group	Pretest		Post-test		Follow-up	
		M	SD	M	SD	M	SD
experiential avoidance	Intervention	47.05	12.87	39.50	12.61	39.30	12.77
	Control	44.45	8.61	44.30	8.63	44.25	8.69
emotional expression	Intervention	27.55	4.70	33.80	5.32	33.50	5.58
	Control	31.65	4.00	32.00	3.83	31.95	3.72

An analysis of variance with repeated measures was utilized to look into the significance of the difference in

experimental avoidance scores between the two emotion regulation groups and the control group.

**Table 3- The effect of time and group on experimental avoidance by repeated measurement analysis**

Variables	Effect	SS	Df	MS	F	P	Eta
Experiential avoidance	Time	185.08	1.38	133.96	124.74	0.001	0.81
	Time*Group	106.02	1.38	76.73	71.43	0.001	0.71
	Group	263.51	1	263.51	5.87	0.022	0.17

The results of Table 3 indicate that analysis of variance is significant for within-subject (time) and

between-subject factor as well as group and time interaction for experiential avoidance variable.

**Table 4- The effect of time and group on emotional expression by repeated measurement analysis**

Variables	Effect	SS	Df	MS	F	P	Eta
Emotional expression	Time	143.11	1.07	133.74	93.65	0.001	0.80
	Time*Group	87.24	1.07	81.53	42.06	0.001	0.65
	Group	349.52	1	349.52	40.30	0.001	0.64

The results of Table 4 indicate that analysis of variance is significant for within-subject (time) and between-subject factor as well as group and time interaction for emotional expression variable.

## Discussion

This study aimed to determine the effectiveness of rational-emotional-behavioral group therapy on experiential avoidance and emotional expression in patients with irritable bowel syndrome. The result of this research was in line with Zahrakar & Kasaei (15), El-Nahhas (17), and Rostami et.al (19).

In explaining the effectiveness of group counseling in a rational-emotional-behavioral manner in improving experiential avoidance and emotional expression of patients with irritable bowel syndrome, the following can be noted. One is that in this treatment approach, each patient's specific dysfunctional beliefs are examined and evaluated, and they are faced with the fact that they may not support the contents of their minds, self-tellers, or perceptions and interpretations that have situations

(1). On the other hand, the ability to question dysfunctional beliefs can provide them with a promising, energizing, and healthy mental voice. Encountering the fact that they can and can manage their minds and not capture their negative and dysfunctional beliefs makes them more capable of overcoming, experiential avoidance and emotional expression in patients with irritable bowel syndrome. The other is that this method helps patients to take advantage of these skills and overcome negative emotions by teaching them different techniques such as sedation, mental image, deep sedative breathing. Other techniques of this treatment, such as assertiveness, also lead them to express themselves. When they can recognize their rights correctly and act authoritatively and at the same time calmly in their communication style and solve their problems effectively, they can lighten their mental load and feel more empowered to choose positive thoughts and thus positive emotions. Group

Counseling in an emotional-behavioral rational way seeks to educate clients to think logically about the issues that are happening in their lives and to be more responsible for their emotional and emotional deficiencies (12).

Rational-emotional behavior therapy methods work appropriately in these groups and the members of the group are encouraged to confront their irrational feelings and thoughts and try to replace new behaviors and receive feedback in this regard (10). Therefore, the expectation that people in the group have opportunities to use their thoughts, feelings, and emotions and thus challenge them to improve, experiential avoidance and emotional expression, can also support the logic of effectiveness of the present intervention which has resulted in meaningful improvement, experiential avoidance and emotional expression of patients with irritable bowel syndrome.

The use of self-report techniques is one of the study's shortcomings. People's responses to these assessments, including their opinions and self-reports, may differ from what we see in their actions and behavior. This study did not take into account environmental or family factors. Family conditions and socioeconomic status, for example. In future studies, the researcher will benefit from a professional as a therapist and treatment training to lessen the probability of bias in the research.

## Conclusion

It can be said that rational-emotional-behavioral group therapy was effective on experiential avoidance and emotional expression in patients with irritable bowel syndrome. Rational-emotional-behavioral group therapy can be used to reduce psychological problems in patients with irritable bowel syndrome.

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