Original Article

Group Emotion Regulation Therapy for Illness Anxiety Disorder: A Randomized Controlled Trial Emotion Regulation Therapy for Illness Anxiety Disorder

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Abstract

Background & Objective: People with Illness Anxiety Disorder experience excessive worry and in this regard, they have a lot in common with Generalized Anxiety Disorder. Emotion Regulation Therapy (ERT) is a multifaceted and integrated treatment that is widely used for Generalized Anxiety Disorder and its effectiveness in anxious factors has been established in many studies.
The aim of the present study is to examine Effectiveness of Emotion Regulation Group Therapy in symptom reduction and worry in individuals with Illness Anxiety Disorder through a Randomized Clinical Trial (RCT).
Materials & Methods: This is a Randomized Clinical Trial (RCT) experimental study with pre-test and post-test and control group. Population of the of the present study included all people with Illness Anxiety Disorder in Shiraz in 2019 who went to the psychiatric clinics of Shiraz University of Medical Sciences. The sample was 16 people with Illness Anxiety Disorder who were randomly assigned to the experimental group and the control group. The subjects in the experimental group and the control group were assessed in both pre-test and post-test periods using Structured Clinical Interview for DSM-5 (SCID-5-5), Anxiety and Related Disorders Interview Schedule for DSM-5 (ADIS-5) and The Penn State Worry Questionnaire (PSWQ).
Results: Results showed that group format of emotion regulation therapy significantly improved symptoms of anxiety and worry of individuals with illness anxiety disorder.
Conclusion: Emotion Regulation Therapy throughout intervention in worry and emotion regulation construct which is known as mediators in the treatment of many disorders, significantly improve symptoms and worry of people with Illness Anxiety Disorder.

Keywords: Emotion Regulation Therapy, Group therapy, Worry, Illness Anxiety Disorder

Introduction

Illness Anxiety Disorder is a new diagnosis in Diagnostic and Statistical Manual of Mental Disorders (DSM-5). The main features of Illness Anxiety Disorder are preoccupation with having or acquiring a serious illness, high levels of anxiety about health and excessive health-related behaviors or maladaptive avoidances (1). Illness Anxiety Disorder is described as a type of hypochondriasis in DSM-IV (2). A significant proportion of hypochondriac people have high levels of anxiety about their health in the absence of somatic symptoms, and many of these symptoms cannot be described in one anxiety disorder. The diagnosis of Illness Anxiety Disorder is used for this group (1).

Although hypochondriasis falls into the category of somatic symptom and related disorders, the validity of this classification has been in doubt. It has always been argued that hypochondriasis can be better conceptualized as a part of the anxiety disorder (3). Accordingly, the DSM-5 has replaced hypochondriasis with “Illness Anxiety Disorder", but Illness Anxiety Disorder remains classified as a Somatic Symptom and Related Disorders. However, Illness Anxiety Disorder can be considered both in the diagnostic category of somatic symptom and related disorders and as an anxiety disorder (1).

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The 1- to 2-year prevalence of Illness Anxiety Disorder or disease conviction in community surveys and population-based samples ranges from 1.3 to 10%. In ambulatory medical populations, six months to one year prevalence is between 3% and 8% (1). In addition, in another survey, about 15% of the general population were mentally preoccupied with becoming ill and disabled (2). Due to the novelty of the diagnosis of Illness Anxiety Disorder and the relatively high prevalence of this disorder, few researches have been done on it. On the other hand, since Illness Anxiety Disorder is characterized by a major focus on health worries and the first referral is generally to medical settings rather than mental health settings, and due to the fact that people with Illness Anxiety Disorder seek more reassurance and refer to medical professionals and medical diagnostic laboratories, psychological research in the field of this disorder has been neglected.

Pathological worry is one of the common symptoms seen in many psychological disorders, especially in anxiety disorders. Pathological worry is an excessive, pervasive, and uncontrollable worry, causing a person to feel distress and impairment and decrements in physical function and health-related quality of life (4). According to Barlow (4), worry is a consequence of anxious apprehension, and all disorders characterized by anxiety will also be characterized by worry. Although worry is defined as an essential feature of Generalized Anxiety Disorder (GAD), it is seen as a transdiagnostic construct in several disorders such as health anxiety (5, 6). Also, people with Generalized Anxiety Disorder have more comorbidity of health anxiety than any other anxiety disorder, and this comorbidity suggests the role of underlying factors such as worry in both disorders (7).

So far, different cognitive, behavioral, metacognitive and emotional models have been introduced to describe and explain worry and anxiety disorders. A review of the research literature shows that the cognitive avoidance model, the metacognitive model, the intolerance of uncertainty model, the emotion dysregulation model, the acceptance-based model and the unified model are among the most important models in anxiety disorders (8).

As mentioned, one of the most important models in anxiety disorders is the emotion dysregulation model. In recent years, emotion dysregulation, as a disruptive construct that is involved in many disorders and many pathological theories, have been the focus of many theories and researches (9). Numerous studies have shown the relation between emotion regulation and various mental disorders. For example, emotion dysregulation as a key component in several psychopathology models for specific disorders, such as major depressive disorder, generalized anxiety disorder, social anxiety disorder, and panic disorder (10). In addition, emotion dysregulation plays an important role, especially in anxiety disorders (11).

Some studies have specifically examined the role of emotion regulation in Illness Anxiety Disorder and have shown that emotion dysregulation is a strong and significant predictor of health anxiety (12). It has also been shown that in comparison with healthy people, hypochondriac people have more difficulty identifying their emotions and have more rumination focused on physical symptoms (13). People with health anxiety negatively interpret disease-related information. This negative and automatic interpretation has a significant relationship with emotion dysregulation of these people (14).

The present literature hypothesizes that emotion regulation plays an important role in health anxiety and its treatment. However, there is little research on emotion regulation-based intervention in Illness Anxiety Disorder. In addition, numerous studies have shown that hypochondriasis is a resistant-to-treatment disorder (15). One of the reasons is the lack of conceptualization of this disorder (16). Although several large randomized controlled trials (RCT's) have confirmed the effectiveness of cognitive behavioral therapy and selective serotonin reuptake inhibitors (SSRI), a recent review (17) showed that the improvement in hypochondriasis is only 30% to 50% and the treatment rate is about 25%. On the other hand, various studies have shown that the third wave of behavioral therapies that use elements of cognitive-behavioral therapy, such as Mindfulness-Based Cognitive Therapy (MBCT) (18, 19) and Acceptance and Commitment Therapy (ACT) (20) significantly reduces the symptoms of health anxiety and illness worry.

One of the third-wave behavioral therapies that has received strong research-based support in the field of anxiety disorders over the past decades is

Emotion Regulation Therapy (ERT) (21). ERT is an integrative and short-term treatment approach that helps clients to improve knowledge, acceptance and use of their emotions. This treatment approach melds the principles of cognitive-behavioral therapy (such as self-monitoring and cognitive restructuring) with experiential, emotion-focused, and contextual interventions and involves interventions at the cognitive, emotional, and interpersonal levels.

The emotion regulation model is derived from the literature on emotion theory and emotion regulation and emphasizes the importance of understanding worry in the context of emotion regulation difficulties, because worry can act as an avoidant response to distressing emotions (22). The conceptualization basis of emotion regulation about emotional disorders is that a lack of experience or expression of emotion leads to many and inefficient attempts to control or suppress emotional experiences. In addition, people with emotional disorders often resort to cognitive control strategies such as worry and rumination to compensate for their inability to manage emotions (23).

ERT consists of four phases; the first phase is Psychoeducation. In this stage, the functional patterns of emotions are explained and awareness of emotions in the past and present conditions as well as the destructive importance of suppression of needs and emotions are taught. The patient is also taught to pay mindful attention to his or her physical and emotional symptoms. The second phase is Skill Training. At this stage, emotion management, expression and regulation skills are taught. Also, at this phase, avoiding emotion expression in the clients is challenged. The third step is Experiential Exposure to Promote New Contextual Learning. At this phase, the client is encouraged to apply the learned skills in real-life situations to apply the skills learned in the previous step in everyday life situations. The final phase is Consolidating Gains and Looking Ahead. At this phase, the learned processes are reviewed, the issue of relapse prevention is explained, and the therapeutic relationship ends with encouraging the independence of the patient (24).

Emotion regulation therapy can be administered in groups and can take precedence over individual therapy for two main reasons; first, group therapy reduces the need for a long wait list, and both therapists and clients can make better use of their time. Himle, Van-Etten, and Fischer (25) estimated that group therapy provides an average of 75%-time savings per client, which is also significant in terms of cost. Second, the group creates other benefits for clients, such as having the same experiences, modeling, and supporting the group (26). Aghighi, Mohammadi, Rahimi Taghanaki, & Imani (27) showed that emotion regulation group therapy Improve symptoms of anxiety, worry and difficulties in emotion regulation of individuals with panic disorder.

Moreover, numerous studies have confirmed the effectiveness of group therapies in Illness Anxiety Disorder. For example, the effectiveness of cognitive-behavioral group therapy (28) and acceptance and commitment-based group therapy (29, 30) in health anxiety has been approved. Additionally, Aghighi, Mohammadi, Rahimi Taghanaki, & Imani (31) showed that Group format of emotion regulation therapy significantly improve symptoms of anxiety and quality of life of individuals with illness anxiety disorder.

In sum, high prevalence of Illness Anxiety Disorder, low function and poor quality of life in individuals with this disorder, and novelty of the diagnosis of Illness Anxiety Disorder are the most key factors that make researches in this field important. On the other hand, lack of research in conceptualization and treatment of this disorder, makes it important to achieve effective and short-term treatments for this disorder.

In addition, Illness Anxiety Disorder is a resistant-to-treatment disorder. Despite numerous findings on the effectiveness of pharmacological and psychological therapies, studies have shown that Illness Anxiety Disorder is still one of the less successfully treated disorders and patient's function and quality of life does not improve in long-term period.

Effectiveness of ERT for Illness Anxiety Disorder has not been studied in a research. Therefore, the aim of this study was to examine the effectiveness of Emotion Regulation Group Therapy (ERGT) in improving symptoms and worry in people with Illness Anxiety Disorder.

Materials & Methods

This is a Randomized Clinical Trial (RCT) experimental study with pre-test and post-test designs and control group. The population of the present study included all people with Illness

Anxiety Disorder in Shiraz, who referred to the psychiatric clinics of Shiraz University of Medical Sciences, Shiraz, Iran, in 2019. The inclusion criteria were: (1) Diagnosis of the disorder by a psychiatrist and confirmation of diagnosis using SCID-5 and ADIS-5 by a clinical psychologist, and (2) Absence of other severe psychiatric condition such as psychosis, addiction and suicide that disrupts the group cohesion. The sample included 20 people with Illness Anxiety Disorder (10 male and 10 female) who were randomly assigned into the experimental group (9 people) and the control group (11 people). During treatment sessions, 1 participant dropped out of the experimental group and 3 people dropped out of the control group. So, the final analysis has been done based on 16 people. The number of participants in treatment based on group and sex is shown in chart 1. The subjects in the experimental group and control group were assessed in both pre-test and post-test periods using Structured Clinical Interview for DSM-5 (SCID-5), Anxiety and Related Disorders Interview Schedule for DSM-5 (ADIS-5) and Penn State Worry Questionnaire (PSWQ).

Intervention for the experimental group was performed for eight sessions of 120 minutes, based on Fresco et al.'s model (2013) in Counseling and Psychotherapy Clinic of Shiraz University. The general content of the sessions is presented in table 1.

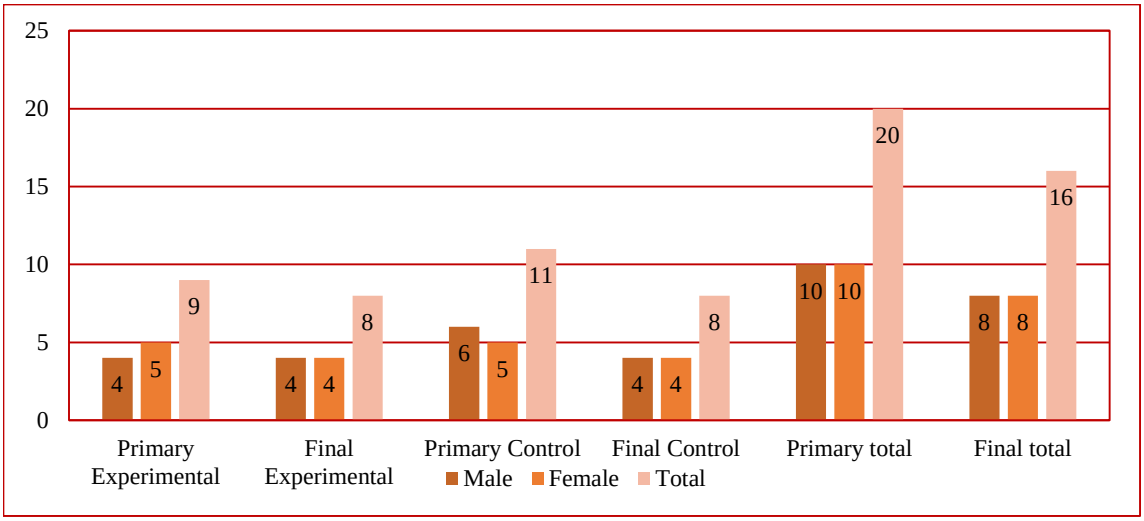

Chart 1. The number of participants in treatment based on group and sex

Table 1. Emotion Regulation Therapy (ERT) Program

Phase 1	**Psychoeducation**	**Group cohesion, Psychoeducation about disorder and worry, Psychoeducation about emotion regulation model, Awareness of Emotion and Motivation**
Phase 2	Skills Training, Awareness and Emotion Regulation	Educational part: Emotion and motivation, Reactive responding Practical part: Relaxation, Body Scan Meditation, Mindful Body Breathing
Phase 3	Experiential Exposure to Promote New Contextual Learning	Emotional avoidance and acceptance, orienting exercise, allowing exercise, gaining distance in time and space, being pro-active and identification of values
Phase 4	Consolidating Gains and Looking Ahead	Progress Review, Future Goals, Relapse Prevention, Termination Processing

Measures

Structured Clinical Interview for DSM-5 (SCID-5-5): Structured Clinical Interview for DSM-5 (SCID-5) is a semi-structured interview for the main DSM-5 diagnoses (formerly given in Axis I). SCID-5 is performed by a clinician familiar with the diagnostic and classification criteria of disorders in the DSM-5. The

population is psychiatric patients or patients with general medical illness - or people who do not identify themselves as patients (such as the population studied in a survey of the general population or relatives of patients). The language used in SCID-5 is suitable for people over 18 years old. People with severe cognitive disorder, restless, or severe psychotic symptoms may not be interviewed for SCID-5. These people are often screened during the first 10 minutes of the examination (32).

The Anxiety Disorders Interview Schedule, Lifetime version for DSM-5 (ADIS-5): The Anxiety Disorders Interview Schedule (ADIS-5) assesses current and lifetime anxiety disorders, and disorders that are similar to the anxiety disorders either conceptually or in terms of presenting symptoms (e.g., Illness Anxiety Disorder) (33). ADIS-5 provided a rating of severity for all Axis I disorders known as Clinician Severity Rating (CSR). The CSR is a 0-8 rating of the severity of symptoms and impairment associated with each diagnosis. A score of 4 or greater is given for diagnoses that meet full DSM-5 criteria and are clinically significant. Brown and Barlow (33) reported an efficient validity and reliability for a principal diagnosis of DSM-5.

The Penn State Worry Questionnaire (PSWQ): The Penn State Worry Questionnaire (PSWQ) (34) is a 16-item self-report measure designed to represent characteristics of pathological worry, such as generality, excessiveness, and uncontrollability. Items on this measure are rated on a five-point Likert scale indicating how characteristic each item is of the individual. Items on the PSWQ are scored from ‘‘Not at all typical=1’’ to ‘‘Very typical=5’’. So, scores range from 16 (low) to 80 (high). Numerous studies approved that PSWQ has excellent psychometric properties, as well as its good internal consistency and test-retest reliability in student, community, and clinical samples (35). Fresco, Mennin, Heimberg, & Turk (36) reported Cronbach’s alpha was good (a = 0.80). The psychometric properties of this scale were measured in Iran by Dehshiri, Golzari, Borjali, & Sohrabi (37). Results have demonstrated good internal consistency (0.88) and test-retest reliability (0.79).

Results

20 people with Illness Anxiety Disorder participated in the present study. During treatment sessions, 1 person dropped out of the experimental group and 3 people dropped out of the control group. So, the final analysis has been done based on 16 people. Mean (and Standard Deviation) of age in experimental group was 28.6 (5.1) and in control group it was 27.1 (3.9).

According to diagnosis of SCID-5 and ADIS-5, in pre-test stage all participants of experimental group and control group met diagnosis of Illness Anxiety Disorder. While in post-test stage, according to SCID-5, 3 participants of experimental group and 7 participants of control group met diagnosis of Illness Anxiety Disorder. According to ADIS-5, 5 participants of experimental group and 7 participants of control group met diagnosis of Illness Anxiety Disorder. Diagnosis of Illness Anxiety Disorder Based on SCID-5 and ADIS-5 In pre-test and post-test of experimental and control group is shown in chart 2.

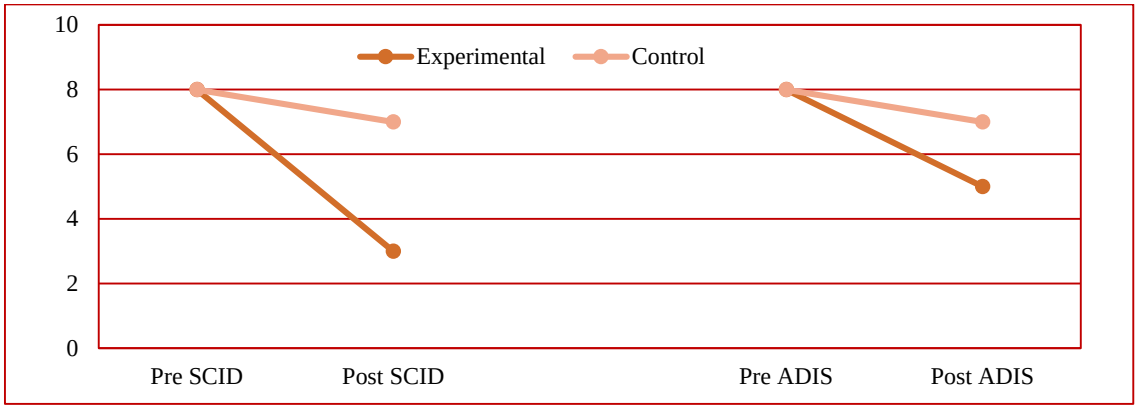

Chart 2. Diagnosis of Illness Anxiety Disorder Based on SCID-5 and ADIS-5 in Participants of experimental and control group in pre-test and post-test stage

Mean (and Standard Deviation) of symptom severity (based on ADIS) and worry (based on PSWQ) in experimental and control group is reported in table 2.

Before performing Multivariate analysis of covariance (MANCOVA), its presumption was examined: Normality tests, homogeneity tests and test of equality of covariance matrices.

To examine the normality presumption, Shapiro-Wilk test of normality was performed. To examine the homogeneity tests, Levene's test of equality of error variances was performed. And finally, to examine the test of equality of covariance matrices, Box's Test of Equality of Covariance Matrices was performed. Results showed that all presumptions were met.

Considering the performed examination, all presumptions of Multivariate Analysis of Covariance (MANCOVA) were respected. Based on results of MANCOVA, Wilks' Lambda is equal to 505 and is statistically significant (Wilks' Lambda=0.505, F=5.391, Sig=0.023). So, Emotion Regulation Group Therapy (ERGT) at least in one scales of symptom severity (based on ADIS) and worry (based on PSWQ) on the experimental group compared to the control group is statistically significant in post-test stage.

Results of Multivariate analysis of covariance (MANCOVA) to examine the effectiveness of Emotion Regulation Group Therapy in people with Illness Anxiety Disorder in post-test stage reported in table 3.

Table 2. Mean (and Standard Deviation) of symptom severity and worry

Scale	Group	Pre-test		Post-test	
		M	SD	M	SD
symptom severity	Experimental	7.3750	0.74402	3.6250	2.61520
	Group	6.7500	1.38873	6.3750	1.59799
Worry	Experimental	49.1250	8.40812	37.8750	7.91811
	Group	53.5000	10.28175	47.6250	10.19716

Table 3. Results of Multivariate analysis of covariance (MANCOVA)

Source	Dependent Variable	df	Mean Square	F	Sig	Partial Eta Squared	Observed Power
Group	Post-test symptom severity	1	41.210	10.128	0.008**	0.458	0.831
	Post-test Worry	1	438.109	5.449	0.038*	0.312	0.574

Significant level: * ($p \leq 0.05$)
** ($p \leq 0.01$)

Discussion

People with Illness Anxiety Disorder experience excessive worry (5, 6) and difficulties in emotion regulation (12, 13) and in this regard, they have a lot in common with Generalized Anxiety Disorder. On the other hand, Health Anxiety has a high Comorbidity rate with GAD and this comorbidity suggests the role of underlying factors such as worry in both disorders (7). However, since Illness Anxiety Disorder is a

new diagnosis in DSM-5 and is characterized by a major focus on health worries and the first referral is generally to medical settings rather than mental health settings, psychological research in the field of this disorder has been neglected (1).

Numerous studies have shown that Health Anxiety/Hypochondriasis is a resistant-to-treatment disorder (15). On the other hand, despite numerous findings on the effectiveness of pharmacological and psychological therapies, studies have shown that Illness Anxiety Disorder is still one of the less successfully treated disorders and patient's function and quality of life does not improve in long-term. Emotion Regulation Therapy (ERT) is a multifaceted and integrated treatment that is widely used for Generalized Anxiety Disorder and its efficacy in both clinician-assessed and self-report measures of anxious factors (e.g. worry, difficulties in emotion regulation and quality of life) of GAD (38, 39), Social Anxiety Disorder (40) and GAD-MDD comorbidity (38, 39) has been established in many studies, although no research has been done on the role of these construct and their treatment through emotion regulation therapy in the treatment of Illness Anxiety Disorder yet. The present study confirmed this effectiveness in Illness Anxiety Disorder.

Results of the present study showed that symptoms severity (based on ADIS-5) and worry (based on PSWQ) of individuals with Illness Anxiety Disorder are significantly improved as a result of Emotion Regulation Group Therapy. These results are consistent with group therapies and emotion regulation-based therapies literature in the field of Illness Anxiety Disorder.

In one side, numerous studies have been approved that group therapies such as cognitive-behavioral group therapy (28) and acceptance and commitment group therapy (29, 30) is effective on symptoms of Illness Anxiety Disorder.

On the other hand, results of the present study are consistent with the existing research literature on the efficacy of Emotion Regulation Therapy in reducing the symptoms severity and maladaptive regulatory strategies include worry, rumination, and self-criticism in emotional disorders. To date, the efficacy of ERT has been demonstrated in a NIMH-funded open trial (OT) and a randomized clinical trial (RCT) (41, 42). Moreover, numerous OT's and RCT's have confirmed support for utility and efficacy of ERT by strong effect size (38, 42, 43). Additionaly, results of Aghighi, Mohammadi, Rahimi Taghanaki, & Imani (27, 31) showed that Emotion Regulation Group Therapy is an effective intervention for Panic Disorder and Illness Anxiety Disorder.

In addition to theoretical and empirical basis of ERT, treatment protocol of ERT, in its current form, target motivational mechanisms, regulatory mechanisms including self-referential (i.e., worry) and behavioral (i.e., avoidance, reassurance-seeking, and compulsive behaviors) responses, and contextual learning consequences that are hypothesized to comprise the distress disorders. Furthermore, ERT protocol in its current form, using body scan mindfulness technique, awareness of physical senses and breathing technique. Effectiveness of these exercises has been proven in reducing physical symptoms of anxiety (21; 23, 24). So, these methods and strategies explain the improvement of the symptoms of people with Illness Anxiety Disorder in the present study.

Finally, in addition to the efficacy of ERT and its current form protocol, the therapeutic role of the group dynamics should not be overlooked. Many people in group therapy find it helpful to meet people who have similar problems, because they can share their experiences and help each other (26). During Emotion Regulation Group Therapy, each member raised their distress in the group, heard feedback and distress from other members, and expressed their opinions, feelings and thoughts about it. As a result of these interactions, members helped each

other to make changes. The psychologist, as a facilitator and neutral member, guided the group's issues in the therapeutic direction and helps each member to reach an insight into his/her problem.

Conclusion

The present protocol of ERT was effective in both clinician-assessed (ADIS) and self-report (PSWQ) measures of people with Illness Anxiety Disorder. ERT consists of intervention in worry and emotion regulation construct, which are known as mediators in the treatment of many emotional disorders, and improve symptoms and worry in people with Illness Anxiety Disorder.

Concludingly, the present study contributes to the body of research literature of the efficacy of short-term therapies. Meta-analysis studies showed that due to social and economic complexities, treatments approaches tend to be short-term (44) and efficacy of short-term structured treatments approaches will help develop these treatment modes. On the other hand, the present study helps to the body of research literature of the efficacy of group therapies. Results showed that emotion regulation therapy can be effective in groups and can take precedence over individual therapy for two main reasons; first, group therapy reduces the need for a long wait list, and both therapists and clients can make better use of their time (Himle, Van-Etten, and Fischer, 2003), and second, the group creates other benefits for clients, such as having the same experiences, modeling, and supporting the group (26).

However, the present study had some limitations. First, Inadequate research literature in the field of Illness Anxiety Disorder leads to misinterpretation of the role of disorder constructs. as mentioned, Illness Anxiety Disorder is a new diagnosis in DSM-5 and characterized by a major focus on health worries and the first refer is generally to medical settings rather than mental health settings, psychological research in the field of this disorder has been neglected (1).

Considering novelty of Illness Anxiety Disorder diagnosis in DSM-5, clarifying the direct or indirect role of anxiety factors in this disorder requires further research. Finally, the present study was the first usage of emotion regulation therapy for Illness Anxiety Disorder and the first usage of emotion regulation therapy in group format. Further research, both in individual and group format is needed to replicate and confirm these findings. Since Illness Anxiety Disorder is a resistant-to-treatment disorder and has a high rate of relapse, proposing and implementing effective and short-term treatments of this disorder can be a hot point in both interventions and prevention in the field of Illness Anxiety Disorder.

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Conflicts of Interest

The authors claim that they have no conflict of interest in conducting this study.

The present study has been approved by research ethics committee of Shiraz University of Medical Sciences. Approval ID is “IR.SUMS.REC.1399.362”.

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