Preventive Care in Nursing and Midwifery Journal
2022; 12(3): 24-40

Imagery-based Cognitive Therapy for Patients with Persistent Depressive Disorder: A Hermeneutic Single-Case Efficacy Design

Maryam Arabnejad[1], Masoud Bagheri[2*], Ghasem Askarizadeh[3]

[1]Ph.D Student of psychology, Faculty of Literature and Humanities, Department of Psychology, Shahid Bahonar University, Kerman, Iran
[2]Ph.D, Associate Professor, Department of psychology, Shahid Bahonar University, Kerman, Iran
[3]Ph.D, Assistant Professor, Department of psychology, Shahid Bahonar University, Kerman, Iran

Corresponding Author Address: Kerman, Pajoohesh Sq., Shahid Bahonar University

Tel: 0098-9367008943

Email: mbagheri@uk.ac.ir

Received: 7 Oct 2021 **Accepted**: 1 May 2022

Abstract

Background: Persistent depression is a chronic and refractory disorder associated with many mental comorbidities. The effects of traditional cognitive therapy, which is the most common treatment for depression, have been negligible.
Objectives: The aim of this study was to assess the effectiveness of imagery-based cognitive therapy in patients with persistent depressive disorder.
Methods: The Hermeneutic Single-Case Efficacy Design (HSCED) was used in this study. This quantitative-qualitative method is an alternative to randomized controlled clinical trials and is used to assess the effectiveness of new therapies in a new group of patients. The case was a 30-year-old man who participated in 13 treatment sessions. The Beck Depression Inventory (BDI-II), Cornell Dysthymia Rating Scale (CDRS), Positive and Negative Affect Scale (PANAS), Rosenberg Self-esteem Scale (RSE), and Brief Core Schema Scales (BCSS) were used to collect quantitative data. Helpful Aspects of Therapy (HAT), the Change Interview (CI), and Therapist Session Notes Questionnaire (TSNQ) were used to gather qualitative data. The data were analyzed by the hermeneutic method and based on 56 criteria of Bohart.
***Results*:** Quantitative findings showed that depression symptoms, positive & negative self-beliefs, and positive & negative self-esteem had significant alterations. Regarding qualitative data and treatment efficacy, according to the 56 criteria of Bohart, there was at least 81% confidence denoting a change in the patient and 75% confidence relating this change to the treatment.
Conclusion: The results indicated that the patient had a positive experience with imagery cognitive therapy that not only alleviated depression symptoms but also improved the lack of self-esteem, which is one of the important signs of persistent depression according to the DSM-5 criteria. However, because this method had no effects on positive & negative core beliefs about others, it is recommended to concomitantly use complementary methods such as Cognitive Behavioral System Analysis Psychotherapy (CBASP), which is a method used to improve interpersonal relationships.

Keywords: persistent depressive disorder, mental imagery, imagery-based cognitive therapy, hermeneutic single-case efficacy design

Introduction

Persistent depression has been recognized as a new disorder in the Diagnostic and Statistical Manual of Mental Disorders, Fifth Edition (DSM-5), published by the American Psychology Association, and is considered a chronic or refractory condition [1]. Traditional cognitive therapy, which is the most widely used treatment for depression, is partially indicated for treating chronic depression [2]. Imagery-based cognitive therapy is a new therapeutic approach that emphasizes the role of mental images in

psychotherapy [3] and has been shown to be more effective than traditional verbal cognitive therapy [4] as it stimulates more emotion [5]. Besides, the verbal challenge is not as much as effective as facing perturbations and images in accessing disturbing memories and their meanings [3]. However, the effectiveness of imagery-based cognitive therapy for treating persistent depressive disorder has not been evaluated.

To be recognized as an effective therapeutic method, the efficacy of imagery-based cognitive therapy should be unequivocally reproduced in at least one randomized clinical trial (RCTs) or in three single-case experimental design studies (SCED) with at least two groups, each with three patients [6]. Today, although controlled clinical trials are used as a way to test the causal relationship between treatments and outcomes, internal validity threats and other limitations of cognitive-scientific methods have challenged their value [7,8]. In fact, because these studies merely focus on the causal relationship between mental health interventions and changes in patients without specifying the nature of the relationship, they are not suitable for exploring the complexities and delicacies of patients' experiences during treatment [9]. As a result, the underlying processes of the beneficial outcomes of interventions remain unkhnown in a black box approach [7], leaving the patient's experiences of the therapeutic elements unexplored. Recently, interpretive approaches such as the Hermeneutic Single-Case Efficacy Design (HSCED) have been shown to be suitable alternatives to controlled clinical trials in order to determine the effectiveness of novel therapies or the effectiveness of existing treatments in new populations (at the N = 1). Therefore, these novel approaches have grabbed the focus of researchers to boost the effectiveness of psychotherapy methods [9]. Although this method has already been employed to evaluate the outcome and effectiveness of other therapeutic approaches, for example, transactional analysis therapy in individuals with mild persistent depressive disorder and anxiety [10], as well as in patients with the persistent depressive disorder associated with comorbidities such as major depressive disorder, panic disorder, agoraphobia, and dependent personality disorder [11], there is no research on the effectiveness of imagery-based cognitive therapy in improving persistent depression. The use of HSCED allows to explore the patient's experiences about the treatment process when using specific interventions and to discover phenomena that are not readily recognized and evaluated by quantitative methods [12]. For this reason, to explore experiences about the treatment and assess therapeutic efficacy we studied a client who has been suffering from persistent depression comorbidity with social anxiety for more than 10 years, with smoking and alcohol consumption. The patient had very low self-esteem and experienced painful events such as physical abuse and repeated humiliation by the father, being detained in prison, parental divorce, and a 10-year history of substance abuse.

According to literature, the early onset of this disorder [13] is frequently associated with anxiety disorders, substance abuse, somatoform disorders, chronic illnesses [14], personality disorders, and parental abusive behaviors, particularly during childhood [15]. Disturbing and inconvenient memories are present in 76%-90% of adults suffering from depression [16] and are alive and emotional [17] accompanied by anxiety and negative affections [18]. Another reason for selecting this clientis because these memories are stored in memory in the form of images and have a mutual relationship with self as a cognitive structure, thus they form a information database for self [17] and a basis for the formation of negative self-beliefs and self-attitudes [19]. Accordingly, it can be assumed that the chronic problems of these individuals originate from toxic childhood experiences, contributing to the development of depression. Therefore, we hypothesized that treating such patients with imagery-based cognitive therapy would provide rich information. The goal of this study was to assess the effectiveness of treatment in reducing depression symptoms (as the primary outcome) and in changing the patient's beliefs, positive & negative emotions, and self-esteem (as the secondary outcome). The third goal of this study was to discover processes and explore the patient's experiences with helpful and hinder.

Methods

This study was designed to investigate the effectiveness of treatment using the HSCED method. In this approach, a combination of

quantitative and qualitative methods is used to create a network of evidence to determine the causal relationship between the treatment and the outcomes, as well as possible non-therapeutic explanations [9]. This procedure encompasses the following steps:

1- Collecting information from client, treatment, and therapeutic processes using quantitative and qualitative tools.

2- Hermeneutic analysis: Positive and negative therapeutic consequences were initially collected by the therapist to evaluate outcomes and effectiveness. Positive evidence reflects the effectiveness of treatment, while negative evidence indicates either poor therapeutic outcomes or non-therapeutic explanations for the changes observed. In the next step, the therapist summarized arguments for these two categories of evidence based on the information obtained. This method has a dialectical process during which mutual reasoning is built up for each category so that a conclusion can be reached over these pieces of evidence and arguments for explaining treatment effectiveness and understanding related processes.

3. Conclusion: The third step of HSCED includes drawing a general conclusion according to the information obtained. There are three methods to evaluate the strength and validity of positive and negative evidence: 1- reviewing by reviewers [7], 2- the simple method [20], and 3- mixed-method [7] (which is a combination of the first two methods). In this study, the simple method of hermeneutic analysis based on 56 Bohart criteria was used to reach a conclusion. Bohart criteria comprise a list of exploratory methods that reflect the extent of changes in the client and determine how much treatment has been responsible for these changes. Finally, according to the number of positive evidence respective to the total number of Bohart criteria, the confidence percentage is calculated to determine the extent of changes in the patient and the effectiveness of treatment [21].

The Participant:

The client was a 30-year-old single man, the first child, with a diploma, a part-time job, smart, and a sense of curiosity. He was referred to a medical care center, and because he met the diagnostic criteria for the persistent depressive disorder based on DSM-5, he was purposefully selected for this study. He experienced a depressive mood in his daily activities on most of his days (criterion A1), as well as insomnia (criterion B2), feeling tired and lack of energy (criterion B3), low self-esteem (criterion B4), poor concentration or difficulty in making decisions (criterion B5). These symptoms have been persistent for more than two years (criterion D), causing problems in his job performance (criterion I). Besides, the symptoms that would rule out the diagnosis, such as hypomania and schizophrenia, and other mood disorders, were absent. The specifiers of his depression were: moderate severity, early-onset disease (before the age of 21 years), and associated anxiety. Other specifications included the lack of substance abuse over the past three years, lack of borderline personality disorder, not being schizotypal or antisocial, and not having suicidal ideation or serious physical illnesses that could influence or cause depression. He had a history of substance abuse and had been quitting for four years. His parents divorced 12 years ago. Among his unpleasant experiences during childhood and adolescence were his father's abusive behaviors such as humiliation, insults, and beating, being imprisoned and seeing parental divorce, living with relatives and experiencing their inappropriate behaviors, and simultaneously, the start of drug abuse.

The Therapist

The therapist was a 44-year-old psychology Ph.D. student with nine years of working experience in counseling centers with a cognitive-based therapy approach.

Treatment

All ethical issues such as confidentiality and freedom to withdraw from the research were observed during the study. After selecting the client and obtaining informed consent, the questionnaires were completed. The treatment was conducted once a week for a total of 13 free-of-charge sessions of 90 minutes. Topics and practices were based on imagery-based cognitive therapy protocols according to Holmes, Halls, Young & Di Simplico (2019) [22], Hakman, Bennett Levy & Holmes 2011 [3], MacIvy, Salsman & Rap (2018) [23], Plasicose (2018) [24], Renner, Murphy, Jay, Menley & Holmes (2019) [25], and Corleblum, Di Jung, Horjebretz & Dunson (2009) [26]. A summary of the sessions has been provided in Table 1.

Table 1: The Summary of Imagery-based Cognitive Therapy Interventions

Session	Aims	Content	Worksheet
Evaluation, formulation, and education sessions for image-based cognitive therapy			
1	Greetings, reviewing the schedule, understanding persistent depression, introducing the model, the structure of sessions, and the requirements to be observed by the patient	Understanding persistent depression, preparing a list of problems, reviewing pharmaceutical issues, and positive and negative coping strategies Understanding the concept of mental image, creating motivation for change	What is a mental image worksheet? Looking-forward worksheet
2	Assessment of avoidance behaviors Image-based target selection (goals and skill learning)	Education on how to reach goals with the help of images	Image-based target-selection worksheet Image-based behavior triggering worksheet
3	Creating an appropriate platform for imagery-based interventions Picturing a safe place to regulate excitement Recognizing various types of images and persuading the patient to discover different types of images	Recognizing various types of mental images related to the past, present, and future, as well as metaphorical images	The worksheet for recognition of different types of mental images
4-6	Selection of multiple images from the worksheet of recognition of various types of images for micro-formulation Choosing a treatment strategy based on micro-formulation and obtaining the patient's consent	Micro-formulation of images, documentation of excitements, evaluation of images, assessing possible responses to images, understanding image maintaining mechanism, image formulation, step-by-step guide on how to complete image micro-formulation, selection of treatment goals based on micro-formulation	Worksheet for emotion documentation and image assessment Image-formulation worksheet
Therapeutic sessions			
7-12	Designation of the target image Selection of treatment method based on the formulation (different types of techniques) Explaining the logic of therapeutic techniques and their steps	Creating novel ways to encounter positive images (educating to be kind to oneself, CMT) Creating novel ways to deal with positive images (COMET interventions) Promoting positive images Image reconstruction techniques Metacognitive techniques: focusing on image features, displacement techniques Competitive assignments with pictures Working with metaphorical images	Compassionate mind worksheet COMET intervention practice worksheet Worksheet for monitoring progress in positive-image practice Worksheet for documenting the meaning of a problematic image Worksheet for creating an antidote for a problematic image Worksheet for monitoring progress in image-antidote practice Metacognitive techniques' worksheet Worksheet for monitoring progress in the use of competitive assignments Worksheet for metaphorical and confrontational images
Follow-up sessions			
13	Preparation of a video	Preparing questions to make an educational video	Seeing the educational video

Quantitative Tools

The Beck Depression Inventory (BDI-II) was used to determine the severity of depression symptoms [27]. The internal stability of the tool in foreign studies has been reported at 73%-92%, and the alpha coefficient has been 86% for the

patient group and 81% for the non-patient group. In an Iranian population, the alpha coefficient was reported at 92% for outpatients, and its validity has been reported between 70%-90% [28]. The Cornell Dysthymia Rating Scale (CDRS) [29] is used to assess the frequency and severity of depression symptoms [14]. Internal stability in foreign studies has been between 64% and 83%, and concurrent and content validity indicated that it is a valuable tool [30]. The alpha coefficient has been reported as 0.92 in Iranian studies [31]. The Rosenberg self-esteem scale (RSE) assesses a person's positive and negative self-feelings [32]. In Iran, reliability based on Cronbach's alpha and retest method has been reported at 69% and 78%, respectively, and its concurrent validity along with the Cooper-Smith self-esteem questionnaire was obtained at 61% [33]. The Brief Core Schema Scales (BCSS) measures a person's beliefs about himself/herself and others, delivering four possible outcomes: self-negative, self-positive, others-negative, and others-positive. The alpha coefficient was 0.78 for self-positive, 0.84 for others-positive, 0.84 for self-negative, and 0.87 for others-negative, showing satisfactory values in clinical samples [34]. The positive and negative affect scale (PANAS) has been designed to measure positive and negative emotions [35] with Cronbach's alpha coefficients of 80% and 84% for positive and negative affections, respectively [36]. The validity of the two subscales has been reported to be 0.85 in an Iranian population, which is satisfactory [37]. For quantitative analysis, the percentage of recovery was obtained by deducting the pre-treatment target problem (A0) from the post-treatment target problem (A1), dividing by A0 (formula below). According to this formula, a 50% or more change in a case study is considered significant [38]:

$$\Delta A\% = (A0 - A1) / A0$$

Clinical significance was analyzed according to the cut-off score [20].

Also, qualitative tools included Helpful Aspects of Therapy (HAT) [39], Change Interview (CI) [9], Therapist Session Notes Questionnaire (TSNQ) [9], and Bohart criteria [21].

Results

Quantitative Findings

The indices of improvement in BDI-II score, CDRS, RSE, positive self-beliefs, and negative self-beliefs were 66%, 72%, 75%, 80%, and 70%, respectively, which persisted at the one-month follow-up. In addition, the threshold of 14.5 indicated an optimal cut-off point in the BDI-II questionnaire [40]. Because the patient's post-treatment BDI-II score was 11 or lower (i.e., ≥10 points higher than the pre-treatment score) [41], the decline was clinically significant. Therefore, the patient was tagged as improved according to the Beck Depression Scale.

Regarding the Cornell scale, a cut-off score of less than 20 [42] indicates clinical significance, indicating that the patient has changed significantly. For the self-esteem scale, a cut-off score of <16 indicates low self-esteem [43] and clinical significance. Regarding Core Schema average scores in the main schemas of positive self-beliefs, negative self-beliefs, positive others-beliefs, and negative others-beliefs, the cut-off values were obtained as 10.20, 3.55, 10.43, and 4.07, respectively [34], denoting clinically significant results in the areas of positive and negative self-beliefs. On the other hand, positive and negative affections and positive or negative beliefs towards others did not change significantly. These findings have been summarized in Table 2.

Table 2: The Patient's Improvement in Depression, Self-esteem, Positive and Negative Affections, and Core Schemas

	Depression questionnaires		Positive and negative affect scale		Self-esteem questionnaire			Brief Core Schema Scale			
	Beck inventory	Cornell Dysthymia	Positive affect	Negative affect	Positive self-esteem	Negative self-esteem	Total self-esteem	Self-positive	Self-negative	Others-positive	Others-negative
Pre-treatment	24	43	24	28	10	6	16	8	10	2	12
Mid-treatment (session 8th)	11	21	24	24	16	9	25	10	6	4	14
Post-treatment	8	12	30	25	18	10	28	15	2	2	16
Follow-up	7	11	32	25	18	10	28	15	3	2	14
Treatment recovery index	%66	%72	%25	%10	%80	%66	%75	%80	%80	%0	%33
Follow-up recovery index	%70	%74	%33	%10	%80	%66	%75	%80	%70	%0	%16

Qualitative Outcomes

A: In the form listing the helpful aspects of Therapy (Table 3), the patient ranked all beneficial events from seven (moderately useful) to nine (very useful) except for the events of sessions 2nd and 12th. According to the patient, the useful aspects of treatment included motivation for effort (sessions 1,9, and 13), becoming informed of negative thoughts (sessions 2, 3, 5, 9, 10, and 13), being kind to oneself (sessions 2 and 5), coping with negative thoughts (sessions 3, 6, 7, 8, 9, 11, and 13), creation of positive emotions (sessions 4, 6, 7, 8, 9, and 10), becoming aware of negative emotions (sessions 4, 8, and 9), reduction of negative emotions (sessions 10 and 11), and feeling better when communicating with others (session 10). The patient also outlined some barriers to treatment, including negative thoughts constantly storming into the mind and stealing away motivations to try, sleep disorders, smoking, recalling and reviewing painful and irritating memories, discomfort with the therapist's gender, and frequent therapeutic tasks. Table 3 provides a summary of these findings.

Table 3: The Summary of Treatment Helpful Aspects from the Patient's Perspective

Session	Type of intervention	Ranking	Event	What makes this event helpful or important?
1	Image-based target selection	9	Imagination and seeing one's vision for the next 10 years with or without depression	When my mind stops me, this image motivates me to try and change, while my inner thoughts tell me that I cannot do so (such as my mother's and my friends' voices).
2	Behavioral activation	3	Understanding the depression cycle and negative behaviors	I realized that I was caught in a cycle of depression that pulled me down like a whirlpool.
		5	Negative behavior and views towards oneself	I recognized the bad and negative attitude that I had towards myself; I behaved so badly with myself, like a strict teacher.

3	Creating an appropriate platform for imagery interventions	7	Understanding negative thoughts about oneself and paying attention to positive events	When I am upset, and negative thoughts invade my mind, like my mother's voice (you cannot, you will not succeed, it has no point to try, it is like a fire that engulfs me. The method that I learned in this session is like the water that I pour on a fire. Until now, I thought that the situation should be resolved by itself, while many factors are involved in problems that I was unaware of.
4	Recognizing various types of mental images, possible responses to the image	7	Understand the root of feelings of inferiority	Like an ink that a hot spoon would place on the body, which fades over time, of course, if you learn to repair it, and you do not want to forget it. When you imagine a place that you used to go to,
		3	Feeling comfort by recalling good memories of the past	you regain the good feelings of that past; it is like you are there.
5	Recognizing various types of mental images, knowing the image retention mechanism	7	Paying attention to problems and learning about them	I realized that in many cases, I was innocent, yet I would mistreat myself. When I was a child, my father used to beat me because of his anger. Now, I realize that it was not my fault, and there is no need to blame myself.
6	Creating new ways to deal with positive COMET images	7	Paying attention to problems and learning	I realized that in many cases, I was innocent, yet I would mistreat myself. When I was a child, my father used to beat me because of his anger. Now, I realize that it was not my fault, and there is no need to blame myself.
		7	Self-empowerment and getting energy	These events were not repetitive in life. So, I learned to reproduce them by imagination, which makes me feel good; it is like injecting yourself with a booster shot to feel better
7	Promotion of a positive Image	9	Feeling empowered	I can count on myself to practice and accomplish a balanced behavior, which boosts my confidence in doing my work.
8	Image reconstruction	8	Feeling calm and having a positive attitude towards oneself in relationships with the opposite sex.	My thoughts in this area were that perhaps I was talking badly, that I did not know how to speak; it is something inside me making them dislike me. The feeling of worthlessness, a sense of deficiency in these annoying memories, bothered me, making me tell myself that nobody likes me. By image reconstruction, I learned to drive the poison out of my body and reduce its negative effect with an antidote, such as, I am good looking, I have good information, etc. Now, I feel better intrinsically in my relationships.
		7	The disappearance of negative thoughts by the bubble magic	The symbol that I used along with reconstruction to remind me to practice this image was bubble magic. It is as if the old image is in the form of a bubble that bursts and disappears, as do my negative thoughts about myself.
9	Working with metaphorical images	8	Awareness about problems such as loneliness, laziness, and ambition, and learning how to solve them	When I used the metaphor of the eagle to illustrate my problems, I realized two things. 1. Loneliness. 2. The far leap of an eagle before approaching the prey. Until the eagle wants to get close to the prey, others would haunt it. I learned to get closer to people and to find available opportunities to reach my goal. I used to keep a large distance. This method made me think that I need to try harder, have less ambition, look for opportunities, keep my hope, admit failure, and allow failure to make me stronger. For example, I thought that it was useless to try harder; it all has to do with economic conditions. Now, I realize that I should be like a soldier who gets shot in war, goes to the hospital, recovers, and goes back to war, but this time smarter and with more effort.

10	Creating new ways to deal with positive images (training to be kind to oneself)	7	Feeling calm	I could easily remember my sister's image, who was a symbol of kindness, but I wonder why I have not already used it to cope with such disturbed memories. In such circumstances, I used to agonize myself. What this method bestowed me was a sense of peace.
		7	A reduction in the feeling of shame	Being kind to myself could reduce the feeling of shame and embarrassment. I realized that this was a sign of strength rather than weakness to be kind to yourself. This method prevented me from feeling bad and brought me a better inner feeling toward others.
11	Metacognitive techniques	7	Reduction of anxiety	Paying attention to other things around me I think I only saw the sad memory in my dream, and it was gone after I woke up.
		7	The fading of the feelings of anxiety and inferiority in childhood memory	
12	Competitive task with imagery	1	Nothing notable was seen in this method that could interfere with the treatment.	The method was very boring and not at all exciting. I did not want to go along with it.
13	Preparing a video	7	Overcoming fear	At first, I did not want to make a film. But making the film about myself showed me that my scary thoughts were nothing.
		9	First aid box	With the help of the first aid kit, I learned to see some distressing events like a dream that is not real or like a bubble that bursts and disappears. Some of them can be transformed if I use an antidote, such as neutralizing a poison by an antidote. I can create some good things myself, like a painter who creates a new masterpiece. Also, I should be kind to myself and alleviate the pain of loneliness by approaching others. I must have fewer ambitions and instead try harder when facing persistent problems.

B: To evaluate the outcome and effectiveness of the treatment, an interview was conducted with the patient halfway through and at the end of the intervention to rank the changes and specify their extent of predictability (i.e., How much likely were these changes to occur without treatment? How much important were they?) (Table 4).

Table 4: A Summary of the Interview Conducted for Specifying Changes in the Patient

		Therapeutic outcomes	The extent of the unexpectedness of changes	The extent of the unlikeliness of changes without treatment	The extent of the importance of changes	The patient's index of changing
Mid-treatment period	1	I feel more self-confident.	2	3	5	3.33
	2	I no longer mistreat myself and love myself.	5	4	5	4.66
	3	I learned to change the bad side for the better by changing the past. I learned a way to change.	3	4	4	3.66
	4	I now deal with unpleasant memories easier.	4	4	4	4
	5	The past pain has subsided greatly (a reduction in worries).	5	5	5	5
	6	I blame myself less.	4	3	4	3.33
	7	I feel less inferior.	4	4	3	3.66
End-treatment period	1	I have achieved some of my goals, such as going to a club. I go to the club three nights a week.	3	3	4	3.33
	2	I have more resilience against problems.	3	3	4	3.33
	3	I know myself better.	2	3	4	3
	4	I have self-confidence.	4	4	5	4.33

Notes: The change interview (Elliott, 2001)
A): Grading on a scale from 1 to 5: 1 = very predictable, 3 = somewhat predictable, 5 = highly unexpected.
B): Grading on a scale from 1 to 5: 1= very unlikely, 3 = somewhat likely, 5 = highly likely.
C): Grading on a scale from 1 to 5: 1 = not important at all, 3 = somewhat important, 5 = highly important

Table 4 shows the patient's changes halfway through the treatment, which were due to increased self-esteem and self-love (number 1, 2, and 6), fighting negative memories, reducing the pain of past memories (number 3, 4, and 5), and reduction of negative emotions (number 7). In the post-treatment step, these changes were attributed to achieving goals (1), resisting problems (2), and acquiring self-knowledge & increased self-esteem (3 and 4). Six out of the eleven ranked changes were unpredictable and would not happen without treatment. The index of change also indicated relatively enormous changes in the patient in the areas of self-love, compromising with unpleasant past memories, and self-confidence.

A: Therapist Session Notes Questionnaire (TSNQ): From the therapist's point of view, positive and negative thoughts had equal shares during the first sessions. As soon as a positive image was built, conflicting negative thoughts would immediately emerge, neutralizing the impact of the positive image. There were dual feelings about treatment, as well as duality in goals such as quitting smoking. Due to this, these images triggered a low emotional load, so more focus was directed on details to boost the emotional load. Among the mechanisms of image retention was the avoidance of undesirable memories. The patient's core beliefs that he gained insights about them included: "I am a failure, I am alone, I am worthless, I am incapable", and intermediate assumptions were: "No matter how much I try, I will not succeed and cannot achieve my goals. If I make a mistake, I will lose my reputation. The future is built by the life conditions, and I have no role in building my future. The economic and financial situation is the most important determinant". Finally, insights towards beliefs and assumptions, rebuilding and reshaping them, and becoming more active (e.g., going to a club) had a positive impact on the patient's mood.

HSCED Analysis

Affirmative Case: The findings of this section were:

1- Changes in the patient's long-term problems: The recovery index and clinical significance according to BDI-II score, CDRS, RSE, and positive & negative schemas towards oneself indicated that the patient experienced changes in the depressive mood, increased self-esteem, enhancement of positive self-belief, and decline of negative self-belief. The patient had long suffered from depression and low self-esteem (for more than 10 years) (change in quantitative data). Also, qualitative data supports these changes when it comes to persistent problems (decreased feelings of inferiority and worthlessness, increased self-esteem and self-love).

2. Retrospective attribution: The patient attributed many of these changes, which he deemed important (the interview of change), to the treatment and believed that reductions in the past suffering and feelings of inferiority and improvement of self-love and self-esteem would not happen without treatment.

3-Process-outcome tracking: According to the checklist of treatment helpful aspects, most of the events were marked moderately to extremely helpful, indicating a change in the client in terms of becoming aware of and fighting negative thoughts and emotions, as well as creating positive emotions, which was compatible with the diagnosis, therapeutic plan, and interventions reported in the therapist's notes.

4. Event-change succession: A change in the internal self-critical dialogue seemed to be an important outcome of the treatment. Initially, awareness of negative thoughts & emotions and fighting them were observed, finally leading the patient to say: I feel more self-esteem now, love myself, I am no longer unkind to myself, and this is a sign of strength and not weakness (useful aspects of treatment, the interview for change). Also, the emergence of motivation to try to change in sessions 1, 9, and 13 and behavioral changes, such as going to a club (the change interview), suggested a positive relationship between the event and the change, and the fact that this change has happened gradually.

Skeptical Case:

1- Trivial change or no change: There were no changes in some items, such as smoking and sleep disturbance. There were also some conflicts. In the interview for change, the patient declared a reduction in the pain of past memories alongside a rise in positive emotions. In the checklist of helpful treatment aspects, he also mentioned a change in positive emotions; nevertheless, quantitative data (such as the positive and negative emotion scale) did not support this change. In fact, since imagery-based cognitive therapy better stimulates emotions than verbal therapy, such changes should have been observed. Moreover, there was no significant change in positive and negative beliefs towards others.

2- Reactive effect towards the treatment and therapist and therapeutic expectations: The patient might have reported changes merely because he had participated in the process and secondary to his stereotypic expectations from treatment, and perhaps, the therapist would have boldened the positive performance of the treatment. Otherwise, there has been no report of change in behavior or communication from the perspective of others.

Affirmative Rebuttal: In the form of useful treatment aspects, the patient declared the therapist's gender as a hurdle to treatment, indicating that he has made no effort to satisfy the therapist. This also confirms that beliefs towards others have not changed even with regard to the therapist, showing consistency between data. Because imagery-based cognitive therapy focuses on past memories and their enclosed beliefs, one can see a change in past negative beliefs and emotions about oneself. The lack of change in positive and negative beliefs about others is due to the fact that self-beliefs (but not beliefs towards others) comprise the deepest levels of depressive schemas [19].

Skeptical Rebuttal: Let's say that the treatment has been effective in reducing depression symptoms and negative self-beliefs and boosting positive self-beliefs. When there is a change in the main schemas and beliefs, there should be a reciprocal change in emotions; however, there has been no change in terms of positive and negative emotions. Therefore, this finding is somehow contradictory.

Affirmative Conclusion: The patient's problems included depressive mood, low self-esteem, and negative beliefs about oneself and others. In the initial therapeutic sessions, an atmosphere was created in which the patient was able to become aware of his thoughts and emotions, cope with negative thoughts, extinguish self-criticism, and treat himself more benevolently. This

phenomenon increased his self-confidence and self-esteem and motivated him to try harder. Among the mediators of this process could be the balanced relationship between the client and the therapist and the open space allowing the patient to easily express his criticisms about this relationship. In addition, the therapist fulfilled an active position in this process. Other mediators included the client's enthusiasm and active and cooperative participation in the treatment process and the fact that he had a part-time job.

Skeptical Conclusion: The patient's persistent problems such as sleep disturbance, habitual problems such as smoking, beliefs about others, and positive & negative emotions did not change after receiving this treatment. In general, the patient's interpersonal pattern did not change.

Step 3: HSCED Conclusion Step

In this section, Bohart criteria were used to assess the existing evidence and reach a conclusion over the quantitative and qualitative data obtained [21]. Regarding the dominance of positive evidence for the patient's change, from the first 39 Bohart criteria, there was clear evidence in 31 items; one criteria was not applicable, and no evidence was identified for seven criteria. Overall, the evidence indicated qualitative changes in the patient, and he reported explicit examples of his progress. Therefore, a change in the patient could be verified by 81% confidence. Also, regarding positive evidence in the effectiveness of treatment, out of the second 17 Bohart criteria, clear evidence was available for 12 criteria, and one item was not applicable, retrieving 75% confidence for treatment-caused improvement.

Table 5: The list of summary's Bohart's criteria and presented evidence

	The evidence that shows the client has changed (Case 1-39).	
	Criterion	**Source**
1	Clients note themselves that they have changed	Evidence reported in CI & HAT 6, 7
2	Client mentions things that make it clear that they either did something or experienced something different than what they normally do	Evidence reported in CI & HAT 3, 5,6,9
3	Clients are relatively specific about how they have changed	Evidence reported in CI & HAT 7, 8,10
4	They provide supporting detail	Evidence reported in HAT 9, 10
5	They show changes in behavior in the therapy session plausibly related to the kinds of changes they should be making outside the session	Evidence reported in CI
6	Plausible reports that others have noted that the client has changed	-----.
7	Plausible indicators reported by the client: better grades, new activities such as jogging,..	Evidence reported in CI & HAT 10
8	They mention problems that didn't change	HAT 3
9	They mention problems that did change	Evidence reported in CI & HAT 10
10	The changes mentioned seem plausible given the degree of difficulty of the problem, degree of time in therapy	Evidence reported in CI
11	If there is a major change reported, it is described in rich enough detail to be plausible	Evidence reported in CI
12	If the client comes in depressed they show a reasonably consistent change in mood	Evidence reported HAT 10,13
13	If they report being anxious, they report either managing it better,..	Evidence reported in CI
14	If they report being unable to leave their house (agoraphobia) they report an example suggesting that they made a new and more concerted effort to go out…	HAT 11
15	If their problem is a habit problem (studying, overeating, drinking, smoking, etc.) they report concrete changes.	Evidence reported in CI & HAT 10
16	If the problem is a demoralization problem ("I can't"), or involves demoralization, the person begins to show hope and optimism - a sense of possibility, a sense that it will be a challenge. They become challenge oriented.	Evidence reported in CI & HAT 3,7,8,10
17	Evidence of new-found confidence in judgment	HAT 8
18	Evidence of greater competence in judgment - as the individual thinks out the problem he or she does it more proactively, considers alternatives, weighs them, uses good intuition.	HAT 9
19	Evidence of greater proactive determination and persistence in relation to a reasonable goal.	Evidence reported in CI & HAT 9

20	If they make a risky choice, they seem to make it in a reasonable way	-----
21	Arriving at a major decision that the person was struggling with.	HAT 13
22	Coming up with a whole new plan which is innovative.	HAT 7
23	Getting a new perspective which brings greater coherence, reduces debilitating guilt, gives new positive behavioral options, helps the person let go of something from the past	HAT 9
24	Gaining a new perspective where they seem to be acceptingly criticizing themselves, seeing their own limitations, ...	HAT 5, 8
25	Gaining a perspective that “I am not my problem”	HAT 5
26	Identity work: clarifies fundamental goals and values. If no goals or values, begins to confront these issues. If has adopted goals and values from parents but is beginning to question them, begins to evaluate for self. If is in an “identity crisis,” or moratorium, struggles with issues and makes progress in making commitments.	----
27	Identity work: Real self-controversies - what is my real self? Movement towards some kind of reconciliation or decision.	----
28	Traumatic experiences - signs of letting go of it, coming to terms with it, reductions in symptoms such as flashbacks or nightmares, that these can be handled and are not so debilitating	HAT 7, 11
29	Achievement of specific goals - becoming more assertive,..	Evidence reported in CI
30	Interpersonal changes - reported changes in a positive fashion in relationships - handling anger better, less dependence, greater problem solving, greater realistic acceptance of others	HAT 8
31	Specific changes: finished a project, made attempts to protect daughter, exercising. Made a new friend.	Evidence reported in CI
32	Greater realization that there may be some things that will take ongoing work	HAT 9
33	Changes in self-relationship. Greater realization and appreciation of accomplishments; more specific and concrete and accurate assessment of talents and effort; less global, negative self-attributions,..	HAT 5,10
34	Reduction in any presenting symptoms, such as feeling weak, fearful, tiring quickly, blaming oneself, feeling suicidal, unfulfilling sex life, feeling lonely, frequent arguments, heart pounding, trouble getting along with others, trouble sleeping, headaches.	HAT 2, 10
35	Increases in positive things: self-efficacy, enjoying spare time, feeling loved and wanted, greater happiness, greater sense of direction or optimism,...	HAT 2
36	Better ability to define goals in a proactive and functional way.	-----
37	Prosocial changes - volunteering, involvement in productive activities, new projects.	-----
38	Changes in physiology - less sweating, calmer in therapy.	HAT 10
39	Changes in appearance in a positive fashion.	-----
	Evidence that it was therapy that helped (item 40-56)	
40	Clients themselves report that therapy helped	Evidence reported in CI & HAT 6, 7
41	Clients are relatively specific about how therapy helped, and it is described in a plausible way	Evidence reported in HAT 9, 10, 13
42	Outcomes are relatively specific and idiosyncratic to each client and vary from client to client.	Not applicable
43	In their reports, clients are discriminating about how much therapy helped, i.e. they do not in general give unabashedly positive testimonials	Evidence reported HAT 7, 9
44	They describe plausible links to the therapy experience	Evidence reported in CI
45	To the rater a plausible narrative case can be made linking therapy work to positive changes. This includes the following (#46-56):	All therapist notes and HAT
46	Therapy provides a workspace where clients have an opportunity to talk, think, express...Client notes that this helped.	HAT 13
47	Therapist’s empathic understanding, warmth, acceptance, seems to relate to client’s increased engagement, willingness to try new things, productive exploration.	-----
48	Therapist’s encouragement, support, positive attitude seem to be related to client’s overcoming demoralization, willingness to confront challenges, not be discouraged by failure. Therapist supports client productively when client fails....	-----

49	Therapist's warmth, empathic listening, seems to provide safe atmosphere for client to confront painful experiences, and these in turn change	-----
50	Therapist's in-tune questions, reflections, interpretations, or comments, seem to facilitate clients' exploration, gaining new perspectives, developing action plans, creativity. Client feels recognized.	Evidence reported in CI
51	Clients engage in concrete procedures in therapy and changes are congruent with what they are trying to achieve, and there is evidence of these changes. clients engage in chair work and either resolve an internal conflict, and this change persists or at least partially persists in subsequent sessions; clients challenge dysfunctional cognitions and show plausible changes in mood or behavior	HAT 8
52	Issues client struggles with in therapy change plausibly over time in accord with the trajectory of the client's working on them e.g. client talks about them week after week, and has ups and downs, but gradually masters them, and the mastery seems related to their ongoing struggle with it in therapy.	-----
53	Clients report changes in trajectory from their past life in the problem. Clients report something new in regard to coping with the problem, and relate it to therapy, Even if client reports having tried some of these things before, now reports that therapy has helped have confidence in the effort and helps him or her persist.	Evidence reported in CI & HAT 8, 10
54	There are no plausible life changes that could have assumed major responsibility for the change.	There has been no simultaneous change.
55	Topics not dealt with in therapy did not change, or, if they did change, there was a plausible reason why they changed from the therapy or from clearly independent reasons.	----
56	Clients' mastery experiences, problem actuation, and clarification and gaining of new perspectives that occurs in therapy are related to the changes.	Evidence reported in CI

Discussion

The aim of this case study was to evaluate the effectiveness of imagery-based cognitive therapy in a patient with moderate-severity persistent depressive disorder accompanied by with anxiety specifier. The main questions of this study included whether the patient has changed significantly during treatment? What is the role of treatment in these changes? And what are the specific processes underlying these changes?

The results of the hermeneutic analysis demonstrated changes in the patient's persistent problems that were retrospectively attributed to psychotherapy, highlighting the relationship between the outcome and the therapeutic intervention. According to 56 Bohart criteria, the patient changed by 81% confidence, and this change was due to the treatment by 75% confidence. Imagery-based cognitive therapy significantly changed depression symptoms, self-esteem, positive self-beliefs, and negative self-beliefs, and these changes were stable at the one-month follow-up. These findings were consistent with previous reports noting the effectiveness of imagery-based interventions in reducing depression symptoms, including Breyuvin *et al.* (2009) [18], Blackwell & Holmes (2017) [43], and Moritz et al. (2018) [44]. This observation also agrees with the reported effectiveness of imagery-based interventions in reducing negative self-beliefs [45,46] and increasing self-esteem [47]. As mentioned in DSM-5, core self-beliefs and self-esteem are among the most important elements of persistent depression and can explain most depressive symptoms, so an improvement in these beliefs would relieve depression symptoms.

To explain the lack of change in positive and negative emotions, it should be noted that changes in emotions are not at the center of the focus of cognitive-based therapy. Besides, positive emotions are associated with depression, and negative emotions are linked with anxiety and depression, so a long-term treatment is needed for emotions to change despite the improvement of depression symptoms. Overall, changes in emotions require longer-term treatments [36]. This finding is consistent with the reports of Bieber et al. (2021) [48], who also reported improvements in depression symptoms, but not in positive or negative emotions, after psychotherapy.

Also, the analysis of treatment processes in an effort to open the black box of imagery-based cognitive therapy by the hermeneutic method revealed that processes such as triggering motivation to try, becoming aware of negative

thoughts and emotions, being kind to oneself, coping with negative thoughts, formation of positive emotions, reducing negative emotions, and acquiring a better feeling about others played a role in the patient's changes. These changes subsequently boosted his self-confidence, self-love, and self-esteem, mitigated the pain of past negative memories, and enhanced resilience against problems. This finding is consistent with the results of Timolak 2007 [49], who, in a qualitative meta-analysis, categorized the useful treatment experiences reported by patients into nine main categories, including 1-Awareness, insight, self-perception, 2-Behavior change, problem-solving 3-Empowerment, 4- Relief, 5- Discovering emotions and emotional experiences, 6- Feeling of being understandable, 7. Participation, 8- Assurance, support, feeling secure, and 9- self-knowledge. Consistently, another study showed that beliefs about self-efficacy and empowerment are impaired in depressed individuals [50]. According to the results of this study, the alleviation of depression symptoms in the patient was accompanied by an increase in his self-confidence.

From the therapist's point of view, disturbing memories comprise negative core beliefs and assumptions, and acquiring knowledge and insight about them and coping with them using imagery-based cognitive therapy techniques resulted in positive impacts on the patient's mood. Among these techniques that can be used to tackle negative visions and trigger positive images are image reconstruction, using metaphorical images, metacognitive techniques, etc. These findings support the theory that imagery-based interventions can improve negative mood and nurture positive mood in depressed individuals [4] and are consistent with the reports noting a role for image-based reconstruction in reducing the signs and symptoms of depression, as well as the negative self-beliefs rooted in disturbing memories [51], without a need for verbal challenges over these negative beliefs that originate from disturbing memories [18]. Also, in line with this finding, Arendtz (2012) [52] described that image reconstruction was an effective method for correcting the ineffectual information that contributes to the formation of schemas.

In addition, one of the obstacles reported by the patient at the beginning of treatment was the equal share of negative with positive thoughts, so that as soon as possible a positive image emerged, negative thoughts prevented its effectiveness and continuity. Gradually, the share of negative thoughts declined, and positive thoughts contributed a more pronounced role in improving self-confidence and modifying ineffectual beliefs. This finding is consistent with Brewin's retrieval competition hypothesis (2006) [53], who argue that when negative beliefs about self, arising from autobiography memories, are confronted with positive memories, accessibility to negative memories decreases, and change occurs. In conclusion, it can be said that imagery-based cognitive therapy, without verbally challenging core beliefs and merely by invoking images, can improve mood and self-esteem, change negative self-beliefs, and alleviate depression symptoms.

Conclusion

The results of this study showed that the patient had a positive experience with imagery-based cognitive therapy, and this method reduced depression symptoms and improved self-esteem, which is one of the most important features of persistent depression according to DSM-5 criteria. Because imagery-based cognitive therapy could not change our patient's core positive and negative beliefs about others, it is suggested to use complementary techniques, such as Cognitive Behavioral Analysis System of Psychotherapy (CBASP), which has been proven to be effective in persistent depressive disorder, in combination with this method to improve interpersonal relationships [54].

One of the important limitations of this study was that it was time-consuming for the patient due to the long duration of therapeutic sessions, as well as the time needed for completing the questionnaires and participating in interviews.

Acknowledgments

The authors appreciate the esteemed participant who cooperated in conducting this research. This research has been extracted from the doctoral dissertation of the corresponding author, which was approved (with the ethical code of E.A.00.01.17.02) at Shahid Bahonar University of

Kerman. No financial support was received for conducting this research.

Conflict of interest

Authors declare no conflict of interest. This research received no financial support.

Funding:

The research has been carried out by personal funding.

References

1. American Psychiatric Association A. Diagnostic and statistical manual of mental disorders. 5 th ed. Washington, DC: American Psychiatric Association; 2013.
2. Kriston L, Von Wolff A, Westphal A, Hölzel LP, Härter M. Efficacy and acceptability of acute treatments for persistent depressive disorder: a network meta-analysis. Depress anxiety. 2014; 31(8): 621-30.
3. Hackmann A, Bennett-Levy J, Holmes EA. Oxford guide to imagery in cognitive therapy. Oxford university press; 2011.
4. Holmes EA, Blackwell SE, Heyes SB, Renner F, Raes F. Mental Imagery In Depression: Phenomenology, Potential Mechanisms, and Treatment Implications. Annu Rev Clin Psychol. 2016; 12: 249-80.
5. Holmes EA, Mathews A. Mental imagery and emotion: A special relationship? Emotion. 2005; 5(4): 489- 97.
6. Chambless DL, Hollon SD. Defining empirically supported therapies. J consult clin psychol. 1998; 66(1): 7-18.
7. Elliott R. Hermeneutic single case efficacy design. Psychother Res. 2002; 12(1): 1-21.
8. De Smet MM, Meganck R, Truijens F, De Geest R, Cornelis S, Norman UA, et al. Change processes underlying “good outcome”: A qualitative study on recovered and improved patients’ experiences in psychotherapy for major depression. Psychother Res. 2020; 30(7): 948-64.
9. Elliott R, Slatick E, Urman M. Qualitative change process research on psychotherapy: Alternative strategies. Psychol Test Assess Model. 2001; 43(3): 69.
10. Benelli E, Bergamaschi M, Capoferri C, Morena S, Calvo V, Mannarini S, et al. TA treatment of depression: a hermeneutic single-case efficacy design study-‘Deborah’. Int J Transact Analysis Res & Pract. 2017; 8(1): 39-58.
11. Benelli E, Gentilesca G, Boschetti D, Piccirillo C, Calvo V, Mannarini S, Palmieri A, Zanchetta M. TA Treatment of Depression: A Hermeneutic Single-Case Efficacy Design Study-'Sergio' Int J Transact Analysis Res & Pract. 2018; 9(2): 23-41.
12. McAleavey AA, Castonguay LG. The process of change in psychotherapy: Common and unique factors. Psychother Res. 2015; 293-310.
13. Nübel J, Guhn A, Müllender S, Le HD, Cohrdes C, Köhler S. Persistent depressive disorder across the adult lifespan: results from clinical and population-based surveys in Germany. BMC Psychiatr. 2020; 20(1): 1-3.
14. Melrose S. Persistent Depressive Disorder or Dysthymia: An Overview of Assessment and Treatment Approaches. Open J Depress.2017; 6: 1-13.
15. Parker G, Malhi GS. Persistent depression: should such a DSM-5 diagnostic category persist? Can J Psychiatry. 2019; 64(3): 177-79.
16. Payne A, Kralj A, Young J, Meiser-Stedman R. The prevalence of intrusive memories in adult depression: A meta-analysis. J Affect Disord. 2019; 193-202.
17. Conway MA. Memory and the self. J mem lang. 2005; 53(4): 594-628.
18. Brewin CR, Wheatley J, Patel T, Fearon P, Hackmann A, Wells A, et al. Imagery rescripting as a brief stand-alone treatment for depressed patients with intrusive memories. Behav Res Ther. 2009; 47(7): 569-76.
19. Dozois DJ, Beck AT. Cognitive schemas, beliefs and assumptions. Risk factors in depression. 2008; 119: 121-43.
20. Zanchetta M, Picco A, Revello B, Piccirillo C, Benelli E. TA Treatment of Depression: A Simplified Hermeneutic Single-Case Efficacy Design-The Case of “Margherita”. Int J Transact Analysis Res & Pract. 2019; 10(2): 32-65.
21. Bohart AC, Berry MC, Wicks CL. Developing a systematic framework for utilizing discrete types of qualitative data as therapy research evidence. Pragmat Case Stud Psychother. 2011; 7(1): 145-55.
22. Holmes EA, Hales SA, Young K, Di Simplicio M. Imagery-based cognitive therapy for bipolar disorder and mood instability. United Kingdom: Guilford Pub; 2019.

23. McEvoy PM, Saulsman LM, Rapee RM. Imagery-enhanced CBT for social anxiety disorder. United Kingdom: Guilford Pub; 2018.
24. Palacios GL. Factors Influencing Mood and Wellbeing within Imagery Interventions [dissertation]. The University of Western Australia.2018.
25. Renner F, Murphy FC, Ji JL, Manly T, Holmes EA. Mental imagery as a “motivational amplifier” to promote activities. Behav Res Ther. 2019; 114: 51-9.
26. Korrelboom K, de Jong M, Huijbrechts I, Daansen P. Competitive memory training (COMET) for treating low self-esteem in patients with eating disorders: A randomized clinical trial. J consult clin psychol. 2009; 77(5): 974.
27. Beck AT, Steer RA, Brown GK. Beck depression inventory (BDI-II). Pearson; 1996.
28. Fathi Ashtiani A, Dastani M. Psychological tests: personality and mental health evaluation. Tehran. Besat Pub.2019. [In Persian].
29. Mason BJ, Kocsis JH, Leon AC, Thompson S, Frances AJ, Morgan RO, et al. Measurement of severity and treatment response in dysthymia.1993.
30. Hellerstein DJ, Batchelder ST, Lee A, Borisovskaya M. Rating dysthymia: an assessment of the construct and content validity of the Cornell Dysthymia Rating Scale. J Affect Disord. 2002; 71(1-3): 85-96.
31. Rasoulzadeh M, Chalabianloo G R, Abdi R, Sheikh S. The Role Of The Affective And Emotional Composite Temperament (Afect) Model In Predicting The Symptoms Of Dysthymic Disorder (Dd) In Students. Stud Med Sci. 2015; 26 (5): 440-50. [In Persian]
32. Rosenberg M. Rosenberg self-esteem scale (RSE). Acceptance and commitment therapy. Measures package [dissertation]. Australia: School of Psychology University of Wollongong; 1965; 61(52): 18.
33. Mohammadi N. The preliminary study of validity and reliability of Rosenberg’s self-esteem scale. J Iran Psychol. 2005; 1(4). [In Persian]
34. Fowler D, Freeman D, Smith BE, Kuipers E, Bebbington P, Bashforth H, et al. The Brief Core Schema Scales (BCSS): psychometric properties and associations with paranoia and grandiosity in non-clinical and psychosis samples. Psychol Med. 2006; 36(6): 749-59.
35. Watson D, Clark LA, Tellegen A. Development and validation of brief measures of positive and negative affect: the scales. J Pers Soc Psychol. 1988; 54(6): 1063-70.
36. Kring AM, Persons JB, Thomas C. Changes in affect during treatment for depression and anxiety. Behaviour research and therapy. 2007; 45(8): 1753-64.
37. Sharifi H, Bashardoust S, Emami Pour S. Psychometric Properties Of Positive And Negative Affect (Panas). J Psychol Res. 2012; 1: 17-27.[In Persian]
38. Ogles BM, Lunnen KM, Bonesteel K. Clinical significance: History, application, and current practice. Clin Psychol Rev. 2001; 21(3): 421-46.
39. Llewelyn SP. Psychological therapy as viewed by clients and therapists. British Journal of Clinical Psychology. 1988; 27(3): 223-37.
40. von Glischinski M, von Brachel R, Hirschfeld G. How depressed is “depressed”? A systematic review and diagnostic meta-analysis of optimal cut points for the Beck Depression Inventory revised (BDI-II). Qual Life Res. 2019; 28(5): 1111-18.
41. Callesen P, Reeves D, Heal C, Wells A. Metacognitive therapy versus cognitive behaviour therapy in adults with major depression: a parallel single-blind randomised trial. Sci Rep. 2020; 10(1): 1-0.
42. Griffioen BT, van der Vegt AA, de Groot IW, de Jongh A. The effect of EMDR and CBT on low self-esteem in a general psychiatric population: A randomized controlled trial. Front psychol. 2017; 8: 1910.
43. Blackwell SE, Holmes EA. Brightening the day with flashes of positive mental imagery: a case study of an individual with depression. J Clin Psychol. 2017; 73(5): 579-89.
44. Moritz S, Hörmann CC, Schröder J, Berger T, Jacob GA, Meyer B, et al. Beyond words: Sensory properties of depressive thoughts. Cogn Emot. 2014; 28(6): 1047-56.
45. Arditte Hall KA, De Raedt R, Timpano KR, Joormann J. Positive memory enhancement training for individuals with major depressive disorder. Cogn Behav Ther. 2018; 47(2): 155-68.
46. Dainer-Best J, Shumake JD, Beevers CG. Positive imagery training increases positive self-referent cognition in depression. Behav Res Ther. 2018; 111: 72-83.

47. Bramwell KL. The role of imagery and the self in the eating disorders [dissertation]. England: University of Southampton; 2018.
48. Bieber M, Görgülü E, Schmidt D, Zabel K, Etyemez S, Friedrichs B, et al. Effects of body-oriented yoga: a RCT study for patients with major depressive disorder. Eur Arch Psychiatr Clin Neurosci. 2021; 1-3.
49. Timulak L. Identifying core categories of client-identified impact of helpful events in psychotherapy: A qualitative meta-analysis. Psychother Res. 2007; 17(3): 310-20.
50. Rabbani Bavojdan M, Bagheri.M, Rabbani Bavojdan M. Clinical Comparison of General Self-Efficacy Believes of Depressed or Anxious Students with Normal Students. Psychol Res 2012. 15(1 (29)):0-0.[In Persian]
51. Mancini A, Manbeckni F. Rescripting memory, redefining the self: A meta-emotional perspective on the hypothesized mechanism (s) of imagery rescripting. Front psychol. 2018; 9: 581.
52. Arntz A. Imagery rescripting as a therapeutic technique: Review of clinical trials, basic studies, and research agenda. J Exp Psychopathol. 2012; 3(2): 189-208.
53. Brewin CR. Understanding cognitive behaviour therapy: A retrieval competition account. Behav Res Ther. 2006; 44(6): 765-84.
54. Erkens N, Schramm E, Kriston L, Hautzinger M, Härter M, Schweiger U, et al. Association of comorbid personality disorders with clinical characteristics and outcome in a randomized controlled trial comparing two psychotherapies for early-onset persistent depressive disorder. J affect disord. 2018; 229: 262-68.