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The Comparison of the Effectiveness of Mindfulness-based Therapy and Cognitive-emotional Therapy on Cognitive Fusion in Autoimmune Patients

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Abstract

This study aimed to compare the effectiveness of mindfulness-based therapy and cognitive-emotional therapy on the cognitive fusion of autoimmune patients. In this study, the research method was experimental with a pre-test-post-test design and a control group. The statistical population included all autoimmune patients in Tehran who were referred to medical centers in Tehran in 2019, and 45 autoimmune patients(Multiple sclerosis (MS), Type 1 diabetes, and Rheumatoid arthritis (RA), using the purposive sampling method were selected. This number of samples was randomly divided into two experimental groups (15 people in experimental group 1 and 15 people in experimental group 2) and a control group (15 people). The experimental groups were then trained in mindfulness-based therapy and cognitive-emotional therapy (for each therapy, seven weeks and sessions in two hours). But the control group did not receive any training. The instrument used was the revised Cognitive Fusion Questionnaire. Data were analyzed using a multivariate analysis of covariance. Finally, the findings showed that the effectiveness of both mindfulness and cognitive-emotional therapies on cognitive fusion components are desirable, but according to the mean, cognitive-emotional therapy was more effective than mindfulness therapy on the component of cognitive fusion. In conclusion, these therapies will help to decrease cognitive fusion, and improve cognitive defusion in autoimmune patients.

Keywords: Mindfulness, Cognitive-Emotional Therapy, Cognitive fusion, Autoimmune Patients

Introduction

Autoimmune disorders are a group of conditions in which structure or functional damage to cells/tissues/organs/organ systems is produced by the correlation of immunologically competent cells or antibodies against the normal component of the body. This occurs as a result of interaction between several genetic, environmental, and endocrine factors in our immune system by the following mechanisms (Ganapathy, Vedam, Rajeev, & Arunachalam, 2017). An autoimmune disease is an immune response that reacts against self-antigens. Autoimmune disease is considered very rare, although rigorous research has found that the disease now affects 3% to 5% of all people. Therefore, these patients experience social seclusion, depression, and disappointment because of changes in their mentality about their bodies (Liu, & Tang, 2018).Moreover, there is accumulating evidence that the most autoimmune disorders such as multiple sclerosis (MS), antiphospholipid syndrome (APS), rheumatoid arthritis (RA), and primary Sjogren's syndrome (PSS) commonly feature cognitive dysfunction that may be directly associated with the autoimmune pathologic process (Kozora, Burleson, & Filley, 2017).

Cognitive fusion is one of those cognitive dysfunctions, which indicates that patients equate thoughts with reality, and they are not aware of what he or she is thinking at the moment. Given the importance of cognitive fusion in psychopathology, different researchers have examined this construct in autoimmune patients. They have shown the role of cognitive fusion in psychological distress, such as anxiety and depression, as well as in the psychological well-being and quality of life of these patients (Valvano, Floyd, Penwell-Waines, Stepleman, Lewis, et al., 2016; Pakenham, Mawdsley, Brown, & Burton, 2018; Guzmán, Gillanders, Stevenson, & Ross, 2021). Cognitive fusion aggravates patients' negative psychological emotions. When patients have pathological cognitive fusion, psychological flexibility is reduced, and psychological problems occur (Xiong, Lai, Wu, Yuan, Tang, et al., 2021).

In nonclinical samples, Reuman, Jacoby, and Abramowitz (2016) and Reuman, Buchholz, Blakey, and Abramowitz (2017) found that cognitive fusion predicted the unacceptable thoughts obsessive-compulsive symptom beyond the combinations of obsessive beliefs. In a clinical sample of individuals diagnosed with Obsessive-Compulsive Disorder (OCD), however, Reuman, Buchholz, and Abramowitz (2018) found that whereas cognitive fusion uniquely predicted unacceptable thoughts, it did not explain additional variability over and above obsessive beliefs and general distress. The findings of Valvano, Floyd, Penwell-Waines, Stableman, Lewis, et al. (2016) have reported that cognitive fusion plays a significant role in the relationship between cognition fusion, stigma, and well-being in multiple sclerosis populations, as well as in the persistence of mental disorders. In people with high cognitive fusion, psychological distress is more likely to occur (Bardeen, & Fergus, 2016). The best way to prevent many diseases, especially autoimmune diseases, is to maintain a healthy mood (Liu, & Tang, 2018). Cognitive fusion is a promising process for conceptualizing and treating psychopathology, as it is associated with a range of psychological outcomes including depression and anxiety (Bardeen & Fergus, 2016; Carvalho et al., 2019; Krafft et al.,

2019), chronic pain (Bodenlos et al., 2020), and disordered eating (Ferreira et al., 2014). Moreover, interventions designed to reduce cognitive fusion are effective (Deacon et al., 2011; Levin et al., 2012), and changes in fusion mediate the effects of acceptance and mindfulness-based interventions (Gillanders et al., 2014).
Research in the psychological adjustment of autoimmune patients suggests that the way individuals appraise their condition can impact their psychological well-being and adjustments to their condition. Such research has influenced the development of mindfulness-based therapy interventions in this population. Mindfulness has been highlighted as a possible promising complementary therapy, once it promotes the reeducation of thoughts through training, as well as enables the change of habits and perspective toward how the experiences of disease and pain are lived, enabling individuals to face adversities from a new perspective, without fear of being the motivational agent of their behavior (Oliveira, de VilelaAraújo, Branco, De Claudio, Michel, et al., 2021). For example, Irani, Tavakoli, Esmaeili, & Fatemi (2019), demonstrated that mindfulness-based stress reduction can be a beneficial treatment to increase illness acceptance and enhance coping strategies in patients with Lupus. Several recent large RCTs show that mindfulness interventions improve pain management outcomes. For example, 8-week mindfulness interventions have been shown to significantly reduce functional disability and improve pain management in chronic back pain patients (Cherkin, Sherman, Balderson, Cook, Anderson, et al., 2016).), chronic pain patients misusing opioids (Garland, Manusov, Froeliger, Kelly, Williams, et al., 2014), rheumatoid arthritis patients (Davis, Zautra, Wolf, Tennen, & Yeung, 2015; Zhou, Wang, Hong, Xu, Wang, et al., 2020), and fibromyalgia patients (Van Gordon, Shonin, Dunn, Garcia Campayo, & Griffiths, 2017).

The group of autoimmune patients in this study was also treated with cognitive-emotional therapy in addition to mindfulness-based therapy. In addition to emotional arousal, cognitive reflection is associated with lasting changes, and cognitive-emotional processing provides more benefits than avoiding adverse experiences (Grosse Holtforth, Hayes, Sutter, Wilm, et al., 2012). Furthermore, deficient emotion regulation (ER), which is one of the main causes of emotional disorders, may persist even after treatment and remission, increasing the risk of relapse and the persistence of emotional distress (Kanske et al., 2012). The ability to adapt emotionally in the face of adverse circumstances can protect against the negative effects of stressful events. In addition to internal attributes, resilience is also influenced by external components (support from family and friends). Among the most important personal attributes associated with resilience is the ability to self-regulate emotional responses, and to adaptively engage cognitive/executive control (Dolcos, Hu, Williams, Bogdan, Hohl, et al., 2021). As a result of the emotion regulation training, the group which underwent more optimistic towards overcoming adversity and higher levels of executive functioning including cognitive processes that control behavior showed more improvements. Researchers also determined that people experiencing emotion regulation training had weaker connections between brain regions and the

amygdala, a brain structure that plays a crucial role in the experience of emotions (Mosteo, Batista - Foguet, Mckeever, & Serlavós, 2016).

A study was conducted on the effectiveness of this approach in preventing post-traumatic growth in women with breast cancer. The cognitive-emotional intervention had a positive and significant impact on post-traumatic growth among breast cancer survivors. If an intervention is found to be effective, cognitive and emotional strategies of such interventions could be integrated into daily clinical practice for patients (Hamidian, Rezaee, Shakiba, & Navidian, 2019).Using cognitive-emotional training as an intervention strategy for the major depressive disorder may be feasible and effective. The proof-of-concept study highlights the need for future research to understand the effectiveness, as well as the mechanism of action, of these training strategies (Iacoviello, Wu, Alvarez, Huryk, Collins, 2014).New approaches like mindfulness-based therapy and cognitive-emotional therapy aim to help improve changes in cognitive fusion for autoimmune diseases. The treatment of autoimmune diseases should include stress management and behavioral intervention to prevent stress-related immune imbalances. In review of literature of the research, however, mindfulness-based and cognitive-emotional therapies have not been studied in groups of patients with autoimmune diseases. There is still a gap in the theoretical picture of cognitive fusion and the methods of cognitive-emotional intervention for autoimmune patients, despite the many types of research that have been done. As one of the most sensitive and important groups in society, psychologists and counselors should pay special attention to autoimmune patients. Therefore, we conducted the present study to determine if mindfulness and cognitive-emotional therapy affect cognitive fusion in patients with autoimmune disease.

Methods

The present study was a quasi-experimental study with a pre-test-post-test design and a control group. The population of the study included all autoimmune patients in Tehran referred to medical centers in 2019, and the sample consisted of 45 patients of the Association who were selected using the purposive sampling method and were randomly (by sealed envelopes are numbered sequentially) assigned into two experimental groups and one control group (15 people for each group). Inclusion criteria included people with autoimmune disorders (Multiple sclerosis (n=18), Type 1 diabetes(n=16), Rheumatoid arthritis (n=11), aged between 20 and 60 years, minimum level of high school education, ability to attend training sessions, and lack of acute psychological disorders or chronic diseases. Exclusion criteria were simultaneous participation in other counseling, and therapy, absence of two or more training sessions, and unwillingness to participate in sessions.

All three groups were tested in the first measurement by performing a pre-test using the Thought-action fusion scale (TAFS) and the Thought Control Questionnaire, then the experimental groups were trained in seven Two-hour sessions for 14 weeks (Table1). But the control group did not receive any training. Patients were treated at Baran Psychological Center in District 5 of Tehran by the first author of this study. After the therapeutic interventions, all three groups were post-tested with the above scale. The collected data were analyzed using multivariate analysis of variance (MANOVA) with

SPSS - 22 software. The participants were informed about the purpose of the research and its implementation stages. After receiving the consent and emphasizing the confidentiality of the participant's personal information, they were assured that they could leave the treatment at every stage they wished, and the results of the research would be available to them. The instrument used in the present study is the Cognitive Fusion Questionnaire. The characteristics of these two questionnaires are as follows:

Cognitive Fusion Questionnaire: The original 7-item CFQ assesses cognitive fusion in patients with chronic illness. CFQ-CI was designed based on CFQ (Gillanders, Bolderston, Bond, Dempster, Flaxman, et al., 2014). The items are based on a Likert-type scale ranging from "totally incorrect" to "totally correct." Higher scores indicate higher cognitive fusion.This measure contains items like "I get so caught up in my thoughts that I am unable to do the things that I most want to do" and the overall score ranges from 7 to 49. CFQ has good psychometric properties (Trindade, Marta Simões, Ferreira, & Pinto Gouveia, 2018). CFQ is suitable for adolescents as well (Solé, Racine, Castarlenas, de la Vega, Tomé-Pires, et al.,2015). The Iranian original version of the CFQ has good reliability (eg, Cronbach $\alpha = 0.86$; test-retest $r = 0.86$) (Soltani, Momenzadeh, Hoseini, & Bahrainian2016) and validity (eg, $r = 0.66$ and 0.48 when correlated with the Acceptance and Action Questionnaire–second version [AAQ-II] and the Social Interaction Anxiety Scale [SIAS], respectively) (Ruiz, Suárez-Falcón, Riano-Hernández, &Gillanders, 2017). Present questions were modified based on the original Persian version to match the Chronic Illness version (for example, "I tend to get very entangled in my thoughts" to "I tend to get very entangled in my thoughts about my illness and/or symptoms). In the present study, Cronbach's alpha was 0.75.

Meetings	**Table 1:**Content and topics of mindfulness therapy sessions
1	Introducing and getting to know the members. Having a relative knowledge of the thoughts and self-teaching the physical examination technique for the participants and giving training sheets to do at home. Individual interviews and pre-tests.
2	Facing obstacles, awareness of unpleasant experiences. Prepare a list of pleasant and unpleasant experiences that the person has tried to change. Practice living in the moment and be aware of the current need to name unpleasant experiences.
3	The practice of seeing and hearing, breathing with the presence of mind, the practice of seeing and hearing in 5 minutes of consciousness in the present space, teaching the technique of walking with comprehensive consciousness and breathing space of 2 minutes of living in the moment, and training of mind flanking
4	Techniques of staying in the present permission to attend, sitting meditation, Voice and thoughts importance of accepting thoughts sculpture technique.
5	Identifying thoughts are not facts, Identifying, and naming the toxic swamps of mind that you had during your illness. Play movies and talk about the poisonous ants in a person's mind. Poison ants in the mind.
6	Review content awareness for small mood swings, discuss and plan on how best to have a regular understanding of the exercises performed that cause regular or small irregular changes.
7	Summarizing the review of exercises, Imagination practice, and Receiving feedback from post-test patients

Meetings	**Table 2:**Content and topics of cognitive-emotional therapy sessions

1	Communicating and concluding a treatment contract, communicating the rules and goals with patients, Individual and joint evaluation, Establishing a good relationship, the therapist understands the needs of patients and helping their pre-test.
2	Calling and discovering the promotion of conscious re-reading of patients' experiences, encouraging the expression of emotions, and awareness of the suppressed physical sense that has led to the onset of the disease. Awareness of repressed feelings and emotions, paying attention to your bodily feelings. Rereading early experiences Upgrading rereading experiences
3	Drawing narratives and experienced issues Awareness of drawing issues that have caused rumination or conflict in individuals Self-assessmentidentifying the level of emotional vulnerability in the self-assessment to identify the regulatory strategies of the self-assessment person
4	Assessing emotional states stopping rumination and worry, Assessing negative emotions,and Role-play as an evaluator.
5	Identify the negative interactive cycle of increasing knowledge about emotions and feelings, Emotion processing re-evaluation strategy, training, and the interactive foundation of re-evaluation strategy training exercise.
6	Facilitate needs and wants to Increase recognition and identification of self-expressed needs and aspects Emotions restructuring Endurance threshold training technique and emotions Interactive cycle practice (Formation of a circle of people and expression of emotions. This inner circle is constantly moved to the outside until they reach the present and relaxation.)
7	Interaction is based on new perceptions of the cycle in the field of interaction of new emotions and essential needs to determine and evaluate the achievement of goals to provide feedback on the therapeutic and personal changes they had and begin to give feedback to each other.

Results

The participants included 45 autoimmune patients (37.08±8.39 years old) In this study, 30% of the participants had a diploma, 20% had a post-diploma, and 28.22% had a bachelor's degree, and 21.78% had a master's degree or higher. More than half of the participants were also married (61.22).

Table 3: Description of Variables in the Pre-test, Post-test

Groups	variables	Stages	Mean	SD
Mindfulness-based	Cognitive fusion	Pre-test	14.93	3.28
		Post-test	17.33	1.91
	Cognitive defusion	Pre-test	44.53	4.51
		Post-test	48.60	5.26
Cognitive-emotional	Cognitive fusion	Pre-test	14.93	2.65
		Post-test	17.66	1.98
	Cognitive defusion	Pre-test	49.33	4.87
		Post-test	53.40	4.20
Control	Cognitive fusion	Pre-test	15.66	2.62
		Post-test	16.26	2.34
	Cognitivedefusion	Pre-test	53.60	2.30
		Post-test	52.26	5.72

Table 3 presents the mean and standard deviation (SD) of research variables in the experimental and control groups in the pre-test and post-test. The results showed that there is a significant difference between the mean scores of pre-test and post-test in the

experimental groups compared to the control group, and mindfulness therapy and cognitive-emotional therapy have a significant effect on the cognitive fusion and the cognitive defusion in the experimental groups compared to the control group.

Table 4: Multivariate test related to cognitivefusiondependent variable components

Sources	Statistics	F	P-value
(Cognitive fusionPre-test)	Pillai's Trace	105.57	0.001
	Wilks' Lambda	105.57	0.001
	Hotelling's Trace	105.57	0.001
	Roy's Largest Root	105.57	0.001
(CognitivedefusionPre-test)	Pillai's Trace	118.46	0.001
	Wilks' Lambda	118.46	0.001
	Hotelling's Trace	118.46	0.001
	Roy's Largest Root	118.46	0.001
	Roy's Largest Root	15.39	0.001
Group	Pillai's Trace	11.61	0.001
	Wilks' Lambda	18.22	0.001
	Hotelling's Trace	25.97	0.001
	Roy's Largest Root	54.61	0.001

Table4 illustrates that there is a significant relationship between the four methods Pillai's Trace, Wilks' Lambda,Hotelling's Trace, Roy's Largest Root, and the dependent variable components (Cognitive fusion), at the level of 0.01.

Table 5: Multivariate analysis of covariance related to the effectiveness of mindfulness therapy and cognitive-emotional therapy on Cognitive fusion

Source	Variables	SS	df	MS	F	P-value	Effect Size
Cognitive fusionPre-test	(Cognitive-fusion Post-test)	152.10	1	152.10	213.77	0.001	0.84
	(Cognitive-infusion Post-test)	0.13	1	0.13	0.03	0.854	0.01
Cognitive- defusion Pre-test	(Cognitive-fusion Post-test)	1.92	1	1.92	2.07	0.108	0.06
	(Cognitive-infusion Post-test)	932.36	1	932.36	232.76	0.001	0.85
Group	(Cognitive-infusion Post-test)	31.42	2	15.71	22.08	0.001	0.52
	(Cognitive-fusion Post-test)	217.14	2	108.57	27.10	0.001	0.57
Error	(Cognitive-infusion Post-test)	28.46	40	0.71			
	(Cognitive-fusion Post-test)	1160.22	40	4.01			

According to table 6, emphasizing the number of F values obtained, it is suggested that there are significant relationships between the two therapies of mindfulness and cognitive-emotional on the components of dependent variables (cognitive fusion), at the level of 0.01. Therefore, it can be said that the two therapies of mindfulness and cognitive-emotional are effective in cognitive fusion and cognitive defusion. Also, considering the effect size in the mentioned components, it can be suggested that the effectiveness of both mindfulness and cognitive-emotionaltherapies on the cognitive fusion and cognitive defusionare mediocre

Table 6: The Bonferroni test to evaluate the effectiveness of therapies on the variable cognitive fusion

Dependent variable	Treatments	Groups	Mean differences	P-value
(Cognitive-fusion Post-test)	Mindfulness	Cognitive-emotional	-0.010	1
		Control	2.04	0.001
	Cognitive-emotional	Mindfulness	0.010	1
		Control	2.15	0.001
	Control	Mindfulness	-2.04	0.001
		Cognitive-emotional	-2.15	0.001
(Cognitive- defusionPost-test)	Mindfulness	Cognitive-emotional	0.14	0.752
		Control	5.69	0.001
	Cognitive-emotional	Mindfulness	-0.14	0.752
		Control	5.54	0.001
	Control	Mindfulness	-5.69	0.001
		Cognitive-emotional	-5.54	0.001

As can be seen in table 6, there are significant differences between the control group and the two therapies of mindfulness and cognitive-emotional in the components of cognitive fusion at the level of $\alpha = 0.01$. These differences between the two groups are statistically significant, but there are no significant differences between the two experimental groups (mindfulness and cognitive-emotional) in components of cognitive fusion.

Table7: Description and comparison of the scores of the components of the variable cognitive fusion in the two groups

Variables	Treatment	Mean	SD
(Cognitive-fusion Post-test)	Mindfulness	17.33	1.91
	Cognitive-emotional	17.66	1.98
	Control	16.26	2.34
(Cognitive-defusion Post-test)	Mindfulness	48.60	5.26
	Cognitive-emotional	53.40	4.20
	Control	52.26	5.72

According to table7, emphasizing the number of means obtained, it can be said that in cognitive fusion the effectiveness of cognitive-emotional treatment (M=17.66; SD=1.98) is higher than the effectiveness of mindfulness. Moreover, it can be argued that the cognitive-emotional treatment method is more than the mindfulness treatment (M=53.40; SD=4.20) method in cognitive defusion.

Discussion

The aim of this study was to compare the effects of mindfulness-based therapy and emotional-cognitive therapy on the cognitive fusion of patients with autoimmune diseases. The findings of the study show that, in cognitive fusion, the effectiveness of cognitive-emotional treatment is greater than the effectiveness of mindfulness. Cognitive-emotional treatment can be argued to be more effective than mindfulness treatment in cognitive defusion. By these results, Oliveira, de Vilela Araújo, et al. (2021); Irani, et al. (2019); Cherkin, et al. (2016); Davis, et al. (2015); Zhu, et al. (2020), and Van Gordon, et al. (2017) detected the effectiveness of mindfulness treatment. According to a growing body of evidence, mindfulness-based interventions (MBI) may improve coping with pain and psychological symptoms (Davis, et al., 2015; Cherkin, et al., 2016; Morone, et al., 2016). The most well-known variant of MBI is called Mindfulness-Based Stress Reduction (MBSR), a group therapy program that provides systemic training in mindfulness meditation as a self-regulation approach to stress reduction (Taub et al., 2021).

According to Berghoff, Ritzert, and Forsyth (2018), daily experiential avoidance, mindful awareness, cognitive fusion, and self-reported value-guided action were compared with 16 days of mindfulness meditation. The results show that experience avoidance leads to low engagement, whereas mindfulness leads to high engagement in same-day value-guided behaviors. A time-lagged analysis of the data reveals that high experiential avoidance predicts high cognitive fusion, whereas high cognitive fusion predicts reduced mindful awareness the following day. Paying attention mindfully means paying attention on purpose, in the present moment, and without judgment. To cultivate conscious awareness and attention on a moment-to-moment basis, non-judgmentalism and openness are the key elements. To explain the results, first, as expected from Mindfulness-Based Intervention, the intervention improved patients' ability to be mindful of several aspects. In general, they reported an increased ability to observe and regulate emotions and sensations while adopting a non-reactive and non-judgmental stance. Patients seem to use MBI to feel calmer and to decrease psychological tension (Taub, Horesh, Rubin, Glick, Reem, et al., 2021). Considering the literature review, Chiesa, Calati, & Serretti, (2011) concluded that mindfulness-based interventions could improve positive emotion regulation strategies and self-compassion while reducing rumination and experiential avoidance.

In the research of Aghajani and Samadifard (2017), Mojtabaei and Yassini (2017), and Cutright, Padgett, Awada, Pabis, & Pittman (2019), the effectiveness of the treatment method of cognitive fusion has not been studied. In these studies, it has only been

suggested that cognitive fusion and its components (cognitive fusion and cognitive defusion) are associated with anxiety, stress, depression, negative mood, etc., and increase the mentioned factors. Therefore, it is not possible to compare the findings of the present study with the research background. It also appears that cognitive-emotional therapy works better than mindfulness therapy on the elements of cognitive avoidance.Trindade, Ferreira, & Pinto Gouveia (2018) found that baseline psychological health and physical health were negatively correlated with inflammatory bowel disease symptoms. Furthermore, bowel disease symptoms had no impact on psychological well-being, whereas cognitive fusion did. A similar finding was evident for physical health. Based on these results, individuals with higher levels of cognitive fusion tend to have lower physical and psychological health that tends to further diminish over time due to the maladaptive emotion regulation process. Cognitive emotion intervention refers to a method of coping with emotionally motivating information and the cognitive aspect of it. Managing emotions through thoughts and cognitions is intrinsic to the everyday challenges of living. After undergoing stressful experiences, people are assisted to control their emotions (Saeidpoor, Kazemi-Rezai, Karbalaei-Esmaeil, Kazemi-Rezai, & Ahmadi, 2017).

This study has several limitations, most notably a modest sample size and a reliance on self-reporting measures, which may be prone to memory or reporting bias. Thus, our findings should be considered with adequate caution, as they warrant further research support. Another limitation of this study is the small sample size, no controlled condition, no follow-up, no evaluation of personality disorders, and adherence/treatment integrity ratings only by therapists. The lack of comparison of demographic variables, the effects of treatment, and a lack of previous studies on the topic contributed to the limitations of the present study.

Conclusion

Interventions focused on reducing cognitive fusion may be helpful for individuals presenting with autoimmune disorders. Individuals presented with particularly high levels of cognitive fusion may benefit from initial work defusing difficult thoughts, as an inroad to reducing experiential avoidance, anxiety, and depression. Likewise, those with rigid cognitive fusion may benefit from future studies that are encouraged to employ larger samples, aim measures of physical and psychological distress, and more assessment points. Our findings are of clinical and methodological importance. They point to the unique potential of mindfulness-based therapy and cognitive-emotional therapy to ease the cognitive fusion of autoimmune patients, using a group intervention characterized by high cost-effective value (i.e., group setting, short period). Finally, it can be said that cognitive fusion is a factor that can cause anxiety, stress, depression, obsession, etc., in a person suffering from autoimmune disorders. Finally, it can be said that cognitive fusion is a factor that can cause anxiety, stress, depression, obsession, and some other issues in a person suffering from autoimmune disorders.

Disclosure Statements

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