

## The effectiveness of self-compassion-based therapy on mental impatience and emotional distress tolerance in women with multiple sclerosis

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### Abstract

**Introduction:** Multiple sclerosis leads to disability and various sensory and motor disorders in the patient. This research was conducted with the aim of investigating the effectiveness of self-compassion-based treatment on mental impatience and emotional distress tolerance in women with multiple sclerosis in 2021.

**Research method:** The research method was a semi-experimental pre-test-post-test type with a control group. The statistical population of the research was made up of all women suffering from multiple sclerosis covered by the welfare of Sarkhas city, Razavi Khorasan province in February and March of 2021, and 30 of them were randomly selected into 2 experimental groups using available sampling method. And proof (15 people in each group) was placed. The experimental group underwent 8 sessions of 60-minute therapy focused on compassion, and the control group did not receive any intervention until the end of the study. The research tools included mental illness questionnaires by Alikhani et al. (2016) and distress tolerance by Simmons and Gaher (2005). The research data was analyzed by multivariate analysis of covariance using spss software version 26.

**Results:** The results of the research showed that the treatment focused on compassion is effective on mental impatience and tolerance of emotional distress in women with multiple sclerosis ( $P < 0.05$ ).

**Conclusion:** According to the findings of the research, it can be said that treatment focused on compassion is an important and effective factor in increasing distress tolerance and reducing mental impatience in women with multiple sclerosis.

**Keywords:** emotional distress tolerance, mental impatience, multiple sclerosis self-compassion-based therapy

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## Introduction:

Among the chronic diseases of the central nervous system that cause myelin sheath destruction and axon damage is multiple sclerosis (MS) (1), which is autoimmune in nature; It means that the body's immune system reacts abnormally against another part of the body as a foreign agent (2). This damage disrupts the ability of parts of the nervous system to transmit signals, and as a result, a wide range of signs and symptoms are created, including physical, mental and sometimes psychiatric problems (3). MS disease with a ratio of 2 to 3 times the incidence of women to men (4), often occurs in adults aged 15 to 50 years (5). Multiple sclerosis disease leads to disability and various sensory and movement disorders in the patient (6). And it is associated with problems such as severity and frequency of disease recurrence, low perceived social support, ineffective coping strategies, reduced life expectancy, emotional and economic problems, and psychological disorders (7). Therefore, multiple sclerosis seems to have a significant effect on psychological factors such as anxiety and mental impatience.

Restlessness refers to fear, inner trouble and restlessness caused by the circulation of thoughts, which is accompanied by physical manifestations, and the person feels under pressure to be active (8). Anxiety means that the presence of doubt in solving problems plagues a person, and he experiences fear and worry about solving his problems, forgetfulness and weak memory, trouble him, and he misses those who are always They live for sure (9). Therefore, restlessness in a broader sense, i.e., the intensity of thinking, activity and mental dialogue in connection with intellectual issues, makes a person suffer from internal trouble, preoccupation and continuous and permanent restlessness (10), which is accompanied by confusion and a sense of loss. To give complete certainty is to doubt in solving one's problems (11). Therefore, the issue of patients' mental impatience should be taken into consideration when designing and implementing health programs, and our understanding of the issues these patients worry about should be increased (12). Distress tolerance is one of the important variables in MS disease (2). Severe stress caused by the diagnosis of the disease causes many problems, including psychological distress (13). Psychological distress is a state of emotional distress and suffering that is defined by symptoms of depression and anxiety and may be accompanied by physiological symptoms (such as insomnia, headache, and lack of energy) (14). Distress tolerance is a meta-emotional construct that measures a person's expectations about the ability to tolerate negative emotion, evaluating the emotional situation in terms of acceptability, personal regulation of emotion, and the amount of attention attracted by negative emotion (11). According to Simmons and Gaher, people with low distress tolerance engage in behavioral disorder in a wrong attempt to deal with their negative emotions and try to relieve their emotional pain by engaging in some destructive behaviors such as drug use. They find the excitement unbearable and their performance decreases significantly (15).

Compassion therapy is one of the therapeutic methods that seems to be effective for increasing the tolerance of disturbance and controlling impatience (16). Compassion therapy is an emotion-oriented strategy that informs clients about their positive and negative emotions and leads them to acceptance (17). This method consists of three components, including kindness to oneself in

hardships and stressful experiences instead of self-judgment, human commonality and inevitability and failure instead of isolation, and balanced awareness of one's feelings and thoughts instead of extreme assimilation. (3). In this regard, the results of Pourhosseini Dehkordi et al.'s studies (18) showed that compassion-based treatment is effective on the perceived stress and psychological distress of women with breast cancer. Fruten et al. (16) showed that compassion therapy is effective on tolerance of disturbance in patients with multiple sclerosis. The research of Ahmadi et al. (19) showed that the treatment based on compassion is effective on anxiety and depression of women with vitiligo. The results of Kilich et al.'s research (20) showed that the therapeutic approach based on self-compassion leads to the improvement of positive psychological characteristics as well as the reduction of negative emotional and psychological states such as anxiety and physical symptoms. Saijil et al.'s studies (21) showed that self-compassion-based therapy is effective on the psychological symptoms of anxiety patients. Yan et al.'s research (22) showed that the approach based on compassion therapy is effective in improving emotional regulation and rumination in patients with multiple sclerosis.

Although the issue of mental impatience and tolerance of emotional distress in patients with multiple sclerosis is very important and can play an effective role in the exacerbation or vice versa in correctly dealing with the disease, less studies have paid attention to this part. Therefore, in order to investigate this issue and considering the weakness of research in the field of the effect of educational program based on self-compassion on mental impatience and tolerance of emotional distress, especially in the community of women with multiple sclerosis, the main question of the current research is whether the treatment based on Is self-compassion effective on mental impatience and emotional distress tolerance in women with multiple sclerosis?

### **Research method:**

The current research method is a semi-experimental design with a pre-test and post-test with a control group. The statistical population of this research was made up of all women with multiple sclerosis covered by the welfare of Sarkhas city, Razavi Khorasan province in February and March of 2021. From the mentioned population, 30 people were selected by available sampling method and 15 of them were randomly assigned to the experimental group and 15 of them to the control group. The criteria for entering the research were the desire to participate in the research, at least one year had passed since the diagnosis of MS, education at least a diploma, not participating in another psychological program at the same time, and the criteria for leaving were the absence of more than two sessions and unwillingness to cooperate in the research.

After receiving the code of ethics from the Research Council of Payam Noor University and coordinating with the relevant officials of Sarakhs Welfare Department, 30 female patients with MS disease were randomly selected into 2 experimental and control groups (each group 15) people were divided. The experimental group underwent 8 sessions of 60 minutes (one session per week) of compassion-focused therapy in person during the year of well-being communities, and the

control group did not receive any intervention until the end of the study. In order to respect privacy, people were asked to refrain from mentioning their first and last names in the questionnaires. And after the end of the research, the control group was also treated with compassion. Research data was analyzed by multivariate covariance analysis and spss\_26 software. Therapeutic intervention:

**Table 1. Brief description of compassion-focused therapy**

levels	Description of meetings
1	Establishing the initial communication, conducting the pre-test, grouping the members of the experimental and control group, reviewing the structure of the meetings, familiarizing with the general principles of the self-compassion course and distinguishing compassion from regretting, conceptualizing self-compassion training.
2	Mindfulness training along with physical and breathing exercises, familiarity with brain systems based on compassion, empathy training, Training to understand and understand the importance of empathetic attitude.
3	Getting to know the characteristics of people with compassion, teaching compassion towards others, cultivating a feeling of warmth and kindness towards oneself.
4	Cultivating and understanding that others also have defects and problems (cultivating a sense of human commonality), teaching empathy.
5	Encouraging subjects to self-identify and examine their personality as a person with compassion or without compassion according to educational topics, carrying out exercises to cultivate compassionate mind, teaching ways of giving.
6	Acquaintance and application of compassionate mind cultivation exercises (forgiveness, non-judgmental acceptance and tolerance training), problem acceptance training, practical training of creating compassionate images, self-compassion tool styles and methods training (verbal compassion, practical compassion, cross-sectional compassion and continuous compassion).
7	Accepting upcoming changes and tolerating difficult and challenging conditions due to the variability of the life process and facing people with different challenges.
8	Reviewing the exercises of the previous sessions and summarizing and providing collaborations to maintain and apply this treatment method in daily life, post-exam implementation.

## Research tools

**Mental Illness Questionnaire:** This questionnaire was designed by Ali Khani and colleagues in 2017 in the field of emotional excitement and it contains 24 items. The mental impatience test measures one factor with a variance of 0.57, which includes restlessness, restlessness, internal distress, wandering thoughts, manifestation of thoughts, and feeling pressured. This list is graded on a Likert scale from 1 (very little) to 5 (very much). Cronbach's alpha coefficient of the items of this component is 0.93 and indicates the acceptable internal consistency of the items. This test has been confirmed during multiple implementations that the correlation coefficients of the moment as a validity index for the mental restlessness scale is between 0.40 and 0.75 and the Cronbach's alpha reliability coefficient of the mental restlessness scale is 0.92 and the whole test is 0.89. 0 is (8).

**Distress Tolerance Questionnaire:** This questionnaire, created by Simmons and Gaher in 2005, is a 15-item self-report tool. The options of this scale are scored based on a five-point Likert scale (23). The options of this scale are evaluated based on the ability of a person to bear emotional distress, mental assessment of distress, the amount of attention to negative emotions when they occur, and regulatory measures to relieve distress. The options of this scale are scored based on a five-point Likert scale. A score of one means complete agreement with the desired option and a score of five means complete disagreement with the desired option. This questionnaire has a positive relationship with the acceptance of mood and a negative relationship with the coping strategies scales of using alcohol and marijuana, as well as using them to improve. Also, intraclass correlation after 6 months has been reported as 0.61. The reliability coefficient of this test by retest method is 0.81 for the whole scale and 0.71, 0.69, 0.77 and 0.73 for the tolerance, absorption, evaluation and adjustment subscales, respectively. The correlation of distress tolerance scale with problem-oriented, emotion-oriented, less effective and ineffective coping methods is 0.213, 0.278, 0.337, and 0.196 respectively. Also, correlations of 0.543, 0.224 and 0.653 have been obtained between distress tolerance scale with positive emotion, negative emotion and dependence on smoking (24).

## Results:

Demographic findings showed that the average age of the participants was 39.4. 2.97 of the participants were married and 2.8 were single. 2/63 of the participants had diploma education, 27/9 had postgraduate education, and 8/9 had bachelor's education. The mean and standard deviation of the research variables are presented in Table 2.

**Table 2. Descriptive findings of variables of mental impatience and emotional distress tolerance**

The dependent variables	group	pre-exam		post-test	
		M	SD	M	SD
mental impatience	Experiment	74.86	9.36	57.00	8.74
	Control	69.53	10.04	69.73	9.16
Tolerate distress	Experiment	5.13	1.95	8.86	3.04
	Control	5.86	1.72	5.40	1.91
Being attracted by negative emotions	Experiment	9.40	2.92	5.66	2.37
	Control	8.66	2.82	8.86	3.08
Subjective assessment of distress	Experiment	20.33	4.41	14.53	4.71
	Control	18.60	4.77	19.33	5.09
Adjusting efforts to reduce distress	Experiment	6.06	2.73	9.80	3.12
	Control	6.40	2.57	6.86	2.41
Tolerating emotional distress	Experiment	40.93	7.85	38.86	6.18
	Control	39.53	6.52	40.46	7.22

Table 2 shows the mean and standard deviation of mental impatience and distress tolerance for the pre-test and post-test stages, which showed a significant difference in the scores of the experimental group after the treatment focused on compassion. Also, the Kolmogorov Smirnov test, which shows that the assumption of normality is established, is established for all variables of mental impatience and distress tolerance ( $p < 0.05$ ). The results of Lone's test showed that the assumption of homogeneity of variance is also valid for all variables of mental impatience ( $F = 0.21$ ), distress tolerance ( $F = 0.270$ ) ( $p < 0.05$ ). The results of multivariate covariance analysis are reported in Table 3.

**Table 3. Multivariate analysis of covariance**

Test	Value	F	Df1	Df2	P	Eta
<b>Pillai effect</b>	0.343	6.531	2	25	0.005	0.343
<b>Wilks Lambda</b>	0.657	6.531	2	25	0.005	0.343
<b>Hotelling's work</b>	0.522	6.531	2	25	0.005	0.343
<b>The largest root</b>	0.522	6.531	2	25	0.005	0.343

Based on the results of the multivariate covariance test, there is a significant difference in the linear combination of mental impatience scores and emotional distress tolerance in women with multiple sclerosis according to the group ( $\text{sig}=0.0001$ ,  $F=6.531$  and Wilks's  $\lambda=0.657$ ). Eta square also showed that 34.3% of the variance of variables of mental impatience and tolerance of emotional distress in women with multiple sclerosis is determined by grouping variables (experiment and control). Next, univariate covariance analysis was used to examine the difference patterns in each of the dependent variables.

**Table No. 4. Summary of one-way covariance analysis in the context of multivariate covariance analysis**

Variable	Source of changes	sum of squares	df	mean square	F	P	Eta
<b>Mental impatience</b>	Pre-test effect	709.825	1	709.825	5.894	0.022	0.185
	Treatment effect	1458.410	1	1458.410	12.109	0.002	0.318
	error	1313.442	26	120.440			
	Total	125865.000	30				
<b>Tolerating emotional distress</b>	Pre-test effect	82.172	1	82.172	2.638	0.116	0.092
	Treatment effect	20.562	1	20.562	0.660	0.424	0.025
	error	809.978	26	31.153			
	Total	48140.000	30				



As can be seen in Table 4, there is a significant difference in the linear combination of mental impatience scores in women with multiple sclerosis according to the group, and the eta square also showed that 31.8% of the variance of mental impatience in women Patients with multiple sclerosis are determined by grouping variables (individuals of test and control groups).

### **Discussion and conclusion:**

This research was conducted with the aim of the effectiveness of self-compassion therapy on mental impatience and tolerance of emotional distress in women with multiple sclerosis. The findings showed that compassion-focused therapy has led to a decrease in mental impatience and an increase in the tolerance of emotional distress in women with multiple sclerosis. This finding is consistent with the results of studies by Pourhosseini Dehkordi et al. (18), Froutan et al. (16), Ahmadi et al. (19), Kilich et al. (20), Saijil et al. (21), Yan et al. (22).

In explaining this finding, it can be said that self-compassion leads to an increase in compassion and concern for others and oneself, and this makes a person see his experiences in the perspective of common human experiences and find out that suffering, failure and The defect is the necessity of being human and all people "of which I am one" are worthy of compassion and therefore a person can better manage and regulate his emotional states. In other words, judging yourself less leads to judging others less, so there is no need to increase or defend your value like comparing yourself with others (22). Teaching self-compassion in patients with MS caused them to respond to emotions, and feelings of attachment, safety, mutual trust of people and forgiveness in self-criticism include mental preoccupation with self-condemning thoughts. The present study showed that by providing positive experiences, increasing adaptation to stressful conditions and expressing empathy and sympathy, it is possible to increase distress tolerance in people. In compassion-focused therapy, people acquire the skill to recognize painful feelings instead of avoiding them and have compassion and tolerance for those feelings (11). Compassion-based therapy works like physical therapy of the mind, neutralizing the threat system and activating the relief system; As a result of the transformation of this system, the individual's resilience increases and finally, it leads to the improvement of the distress tolerance level. People with self-compassion are better able to deal with distressing events; because they have a higher acceptance ability than other people; Therefore, the emotional turmoil in these people is reduced and the tolerance of the turmoil is increased, which finally realizes the ability to relieve and control oneself (25).

In addition to playing the role of a protective factor against negative mental states, self-compassion also plays a role in strengthening positive emotional states and is related to the creation of positive personal experiences such as social connection and life satisfaction. Self-compassion reveals limitations and identifies unhealthy behaviors such as mental impatience, which enables a person to transform and improve the level of mental health, and somehow causes patients to make judgments in stressful situations. They should not be strict towards themselves and accept that life's problems are an inseparable part of common experiences among all humans (19). In other words, self-compassionate attitude towards women as a coping strategy for women with MS. S



helps to establish a close bond between themselves and others and overcome their mental impatience. The educational program based on self-compassion points to the issue that external soothing thoughts, factors, images and behaviors must be internalized, and in this case, the human mind reacts to external factors in the same way. Confronting these internals also calms down and with this process, the amount of mental impatience can be reduced in them. Educational approach based on self-compassion, women with MS. encourages S to focus on understanding and feeling self-compassion during negative thought processes during impatience, with a strong focus on cultivating self-compassion (20).

### **Suggestions:**

In order to obtain more experimental and research support, it is suggested to conduct similar researches in other parts of the country, taking into account the clinical variables mentioned in the conditions of Corona. The implementation of this research in a wider statistical population should be considered despite the follow-up study in different time periods. This study is considered as a precursor in this field and has the ability to be the source of selection and implementation of additional studies. According to the findings of this research, it is suggested that the officials of the medical centers and hospitals use the educational program based on self-compassion in order to reduce the mental impatience of women with multiple sclerosis along with the treatment process of these patients as a complementary treatment.

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### **Conflict of interest**

The authors of the article have no conflict of interest.

### **Ethical considerations**

In this research, ethical standards include; The principle of respect and confidentiality, preventing the disclosure of the obtained information of the subjects with their real names, the authority and freedom of the subjects to participate or leave the training, and obtaining written consent from the subjects have been observed.

### **Contribution of the authors**

All authors contributed to the writing, submission and follow-up of this article.

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### Research limitations:

The limitation of the research is that the statistical population of the research was made up of female patients with MS from Sarkhes city. Therefore, the generalization of the results of this research to other societies should be done with caution. It is not possible to follow up the results in the long term due to lack of time.

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