KMAN PUBLISHING INSTITUTE
Journal Website

Article history:
Received 21 March 2024
Revised 24 May 2025
Accepted 05 June 2025
Published online 01 July 2025

Psychology of Woman Journal

Volume 6, Issue 3, pp 1-11

E-ISSN: 3041-8615

Comparison of the Effectiveness of Emotion Efficacy Therapy and Compassion-Focused Therapy on Dispositional Mindfulness and Illness Acceptance in Women with Multiple Sclerosis

Elahe. Jafari Fesharaki[1], Zohreh. Raeisi[2*], Mohammad. Soltanizadeh[3], Masoud. Etemadifar[4], Parinaz Sadat. Sajjadian[5]

[1] Ph.D student of psychology, Department of psychology, Na.C.,Islamic Azad University, Najafabad, Iran
[2] Associate Professor, Department of Psychology, Na.C., Islamic Azad University, Najafabad, Iran
[3] Assistant Professor, Department of Psychology, Payame Noor University, Tehran, Iran
[4] Professor, Department of Neurosurgery, Isfahan University of Medical Sciences, Isfahan, Iran
[5] Assistant Professor, Department of Psychology, Na.C., Islamic Azad University, Najafabad, Iran

*** Corresponding author email address**: zohrehraeisi46@iau.ac.ir

A r t i c l e I n f o

Article type:
Original Research

How to cite this article:
Jafari Fesharaki, E., Raeisi, Z., Soltanizadeh, M., Etemadifar, M., & Sajjadian, P. S. (2025). Comparison of the Effectiveness of Emotion Efficacy Therapy and Compassion-Focused Therapy on Dispositional Mindfulness and Illness Acceptance in Women with Multiple Sclerosis. *Psychology of Woman Journal, 6*(3), 1-11.
http://dx.doi.org/10.61838/kman.pwj.6.3.4

A B S T R A C T

Objective: The present study aimed to compare the effectiveness of Emotion Efficacy Therapy (EET) and Compassion-Focused Therapy (CFT) on dispositional mindfulness and illness acceptance in women with MS.

Materials and Methods: This study employed a quasi-experimental design with pretest-posttest and a control group. The statistical population included all women diagnosed with multiple sclerosis who referred to MS specialty centers in Isfahan during the second half of 2023. A total of 54 women with MS were selected through convenience sampling and were randomly assigned to three groups: Emotion Efficacy Therapy (18 participants), Compassion-Focused Therapy (18 participants), and control group (18 participants). The instruments used in this study included the Five Facet Mindfulness Questionnaire (Baer et al., 2006) and the Illness Acceptance Questionnaire (Bishop et al., 2015).

Findings: The findings revealed that both therapeutic approaches were effective in improving dispositional mindfulness (except for the facets of acting with awareness and non-reactivity) and illness acceptance in women with multiple sclerosis. There was no significant difference in the effectiveness of the two therapies on the measured variables.

Conclusion: The results suggest that both therapeutic approaches can be considered effective methods for enhancing mindfulness and illness acceptance in women with multiple sclerosis. Given their similar efficacy, the choice between these therapies can be based on client preference or therapist expertise.

Keywords: *Emotion Efficacy Therapy, Compassion-Focused Therapy, Dispositional Mindfulness, Illness Acceptance, Multiple Sclerosis.*

1. Introduction

Multiple sclerosis (MS) is one of the leading causes of neurological disability among young adults (Jacobs et al., 2024). In this condition, myelin sheaths are damaged or destroyed, and white blood cells attack the body's organs and systems (Lee et al., 2023). The average age of onset for MS is approximately 30 years, and its prevalence in women is about twice that of men (Walton et al., 2020). Recent estimates suggest a global prevalence of approximately 2.8 million individuals (Pourhaji et al., 2024), while in Iran, the prevalence ranges from 5.3 to 74.8 per 100,000 population (Rostami et al., 2024). Individuals with MS experience numerous physical, cognitive, and emotional symptoms. For instance, higher rates of depression, anxiety disorders, and mood disturbances have been observed among MS patients (Ebadi & Babaei Kafaki, 2022). According to Spek et al. (2013), mindfulness is significantly and negatively associated with depression, anxiety, and alexithymia, suggesting that dispositional mindfulness may be an influential variable in MS (Spek et al., 2013).

Mindfulness is defined as a state of heightened attention and non-judgmental awareness of present-moment experiences and is derived from Buddhist meditation traditions (Ebadi & Babaei Kafaki, 2022; Fooladi et al., 2023; Hofmann et al., 2010). The awareness cultivated through mindfulness leads to the recognition that negative emotions may arise, but they are not permanent personality traits. Rather than reacting automatically to events, individuals are encouraged to respond thoughtfully and reflectively. In essence, more mindful individuals are better equipped to understand, manage, and resolve daily problems (Amini et al., 2019).

Another psychologically significant dimension in the context of MS is illness acceptance. A lack of sufficient understanding of the nature of the disease and difficulties in accepting it often result in avoidance of illness-related experiences or persistent attempts to find a definitive cure and eliminate the disease entirely (Horesh et al., 2017). However, such efforts to change a chronic and lifelong condition like MS are often futile or even counterproductive, potentially exacerbating the illness (Iranian et al., 2019). Illness acceptance does not imply weakness or denial; rather, it refers to having the self-confidence to face and cope with uncontrollable issues, thereby facilitating better endurance of the condition. In contrast, non-acceptance may hinder psychological adjustment to the disease and ultimately delay the treatment process (Nosrati et al., 2018). Accordingly, psychological interventions aimed at improving mindfulness and illness acceptance in women with MS have garnered increasing attention from researchers.

Several psychological interventions have been developed to enhance variables influencing MS, including mindfulness-based cognitive intervention (Ebadi & Babaei Kafaki, 2022), supportive therapy (Ebrahimi & Farakhi, 2023), meaning-centered therapy (Najafi et al., 2022), schema therapy (Dīnparast et al., 2023), and acceptance and commitment therapy (Alizadeh et al., 2023). Although many of these interventions have demonstrated effectiveness, full recovery remains elusive in some disorders, and symptom relapse is common (Hofmann, 2018; Hofmann et al., 2010). Moreover, certain therapeutic approaches are time-consuming and costly.

In this regard, Emotion Efficacy Therapy (EET), a relatively new approach, integrates elements from Acceptance and Commitment Therapy (ACT), Dialectical Behavior Therapy (DBT), and Cognitive Behavioral Therapy (CBT). It aims to help patients build constructive relationships with their emotions through five key components: emotional awareness, mindful acceptance, values-based action, mindful coping, and active exposure (MaKay & West, 2016). Research evidence has shown the effectiveness of EET in improving quality of life, pain-related anxiety, pain acceptance, and alexithymia in individuals with chronic pain (Sajadian & Motaharian, 2022), as well as psychological adjustment in women with breast cancer (Mazloom et al., 2020).

Alongside EET, Compassion-Focused Therapy (CFT) developed by Gilbert has also demonstrated efficacy in enhancing emotional well-being. It has been found effective in reducing loneliness, worry, and increasing resilience in MS patients (Mirmaeini et al., 2021), alleviating symptoms of cyberchondria (Fooladi et al., 2023), and improving treatment adherence and lipid regulation in patients with type 2 diabetes (Dehghani et al., 2024). The primary goal of CFT is to reduce self-directed hostility and foster kindness and self-soothing in the face of negative emotions (Vidal & Soldevilla, 2023).

Given the different core mechanisms of these two approaches—CFT focusing on inner compassion and EET emphasizing effective emotion regulation through acceptance and values-based action—the present study aims to compare the effectiveness of Emotion Efficacy Therapy and Compassion-Focused Therapy on the positive and negative dimensions of meta-emotions in women with multiple sclerosis.

PWJ Psychology of Woman Journal
E-ISSN: 3041-8615

2. Methods and Materials

2.1. Study design and Participant

The present study was applied in nature and quasi-experimental in design, using a pretest-posttest-follow-up structure with a control group. The statistical population consisted of women diagnosed with multiple sclerosis who referred to specialized centers in Isfahan during the second half of 2023. Taking possible attrition into account, 54 participants were selected via convenience sampling and were randomly assigned to three groups of 18: Emotion Efficacy Therapy, Compassion-Focused Therapy, and a control group.

Inclusion criteria were: confirmed diagnosis of MS by a physician, age between 18 and 55 years, informed consent to participate, and absence of severe physical illness or psychotic disorders. Exclusion criteria included relapse of illness, absence from more than two sessions, or inability to continue treatment.

The experimental groups received weekly 90-minute sessions for eight weeks. The Emotion Efficacy Therapy was based on the treatment manual by MaKay and West (2016), and Compassion-Focused Therapy followed the Gilbert protocol. The control group received no intervention and was placed on a waitlist. Assessments were conducted at three time points: pretest, posttest, and three-month follow-up.

2.2. Measures

2.2.1. Mindfulness

This questionnaire was developed by Baer et al. (2006). The original English version consisted of 77 items but was reduced to 39 items, measuring five factors: observing (items 1, 6, 11, 15, 20, 26, 31, 36), describing (items 2, 7, 12, 22, 27, 32, 37), acting with awareness (items 5, 8, 13, 18, 23, 24, 28, 34, 38), non-judging (items 3, 10, 14, 17, 25, 30, 35, 39), and non-reactivity (items 4, 9, 19, 21, 24, 29, 33). Responses are scored on a five-point Likert scale ranging from 1 (never or very rarely true) to 5 (very often or always true). Subscale scores are summed to yield a total mindfulness score, with higher scores indicating greater dispositional mindfulness. The FFMQ demonstrates high internal consistency, with Cronbach's alpha coefficients ranging from .75 to .90 (Baer et al., 2006). In a validation study by Khanjani et al., construct validity was confirmed via confirmatory factor analysis in a sample of 571 students from Shahid Beheshti and Tehran University of Medical Sciences, supporting the five-factor structure. Internal consistency using Cronbach's alpha in this sample was .78. In another study by Heydari-Nasab, construct validity was examined with confirmatory factor analysis in a sample of 435 students from Shahed University, with an internal consistency of .83 reported (Amini et al., 2019).

2.2.2. Illness Acceptance

This 20-item scale was developed by Becham et al. (2015) and includes two subscales: Engagement in Activity During Illness (items 4, 7, 11, 13, 14, 16, 17, 18, 20) and Willingness to Endure Illness (items 1, 2, 3, 5, 6, 8, 9, 10, 12, 15, 19). Respondents indicate their answers on a 7-point Likert scale ranging from 0 (never) to 6 (always). Subscale scores are summed to produce a total score, ranging from 0 to 120, with higher scores indicating greater illness acceptance. Becham et al. (2015) reported an overall internal consistency of .83, with Cronbach's alpha coefficients of .81 for Willingness to Endure Illness and .89 for Engagement in Activity During Illness. Factor analysis supported the two-subscale structure, and a correlation of .85 with the Chronic Pain Acceptance Questionnaire indicated strong convergent validity (Mazloom et al., 2020). In the present study, internal consistency (Cronbach's alpha) was .77 for the Engagement in Activity subscale, .86 for the Willingness to Endure Illness subscale, and .88 for the overall illness acceptance scale.

2.3. Interventions

2.3.1. Emotion Efficacy Therapy

The EET intervention consisted of eight structured 90-minute weekly sessions. In Session 1, participants were welcomed, completed the pretest, learned about emotional awareness, practiced mindful acceptance, and were introduced to emotional observation skills and a skill-tracking worksheet. Session 2 included continued practice of mindful acceptance, identification of emotional avoidance, and instruction in "emotional surfing." In Session 3, participants reviewed skills, practiced mindful acceptance, received feedback, were introduced to the "moment of choice" concept, and learned about values-based action and emotional barriers. Session 4 focused on reviewing skills, using the "monsters on the bus" metaphor, and applying values-based action through imaginal exposure. In Session 5, mindful acceptance was reinforced alongside training in

PWJ Psychology of Woman Journal
E-ISSN: 3041-8615

mindful coping and progressive muscle relaxation with emotional exposure, followed by self-soothing skills. Session 6 introduced and practiced counterthinking strategies and fundamental acceptance through direct emotional exposure. In Session 7, participants were trained in attention-shifting and mental breaks, applied during imaginal or emotional exposure. Session 8 involved reviewing the personal EET plan, receiving feedback and troubleshooting, practicing advanced imaginal or emotional exposure using EET skills, rating emotional efficacy, and completing the posttest.

2.3.2. *Compassion-Focused Therapy*

The CFT intervention also comprised eight weekly 90-minute sessions. Session 1 involved pretesting, clarifying treatment expectations, introducing participants and the therapist, and explaining the general principles of compassion-focused therapy. Session 2 covered the "evolved brain" model, distinguishing between the old brain, new brain, and conscious mind, emphasizing that while suffering is not one's fault, responsibility is essential, and included mindful breathing training. Session 3 introduced emotion regulation systems and how their interactions impact individuals, followed by focused attention breathing practice. In Session 4, participants explored the characteristics and skills of compassion and were guided to identify compassionate figures. Session 5 provided instruction on compassionate reasoning and attention, including the "multiple selves" exercise. Session 6 focused on compassionate imagery and somatic compassion exercises, including creating a safe place through imagery. Session 7 trained participants in compassionate feelings and behaviors, culminating in writing a compassionate letter. Finally, Session 8 involved reviewing and consolidating all concepts and practices covered and administering the posttest.

2.4. *Data Analysis*

Data were analyzed through repeated measures ANOVA using SPSS-26.

3. Findings and Results

The mean and standard deviation of participants' ages were 34.67 ± 2.457 in the Emotion Efficacy Therapy (EET) group, 34.87 ± 2.748 in the Compassion-Focused Therapy (CFT) group, and 35.07 ± 2.890 in the control group. The chi-square test indicated that there was no significant difference in age among the groups ($p > .05$). Similarly, the chi-square test for educational background showed no significant difference among the research groups ($p > .05$). Table 1 presents the means and standard deviations of the research variables and their components across the three groups and three assessment phases.

Table 1

Means and Standard Deviations of Dispositional Mindfulness and Its Dimensions Across Three Groups and Three Time Points

Variable	Group	EET Group	CFT Group	Control Group
	Time	M	SD	M
Dispositional Mindfulness	Pretest	123.60	14.327	126.87
	Posttest	141.20	12.388	142.53
	Follow-up	141.13	14.677	142.13
Observing	Pretest	30.73	3.327	31.93
	Posttest	34.73	3.535	34.33
	Follow-up	34.67	3.498	34.00
Describing	Pretest	25.20	3.529	25.93
	Posttest	28.93	3.654	29.13
	Follow-up	28.87	2.875	28.80
Acting with Awareness	Pretest	24.20	5.557	24.87
	Posttest	27.60	4.657	28.40
	Follow-up	27.73	4.234	28.20
Non-Judging	Pretest	21.80	5.583	21.20
	Posttest	26.27	4.079	25.87
	Follow-up	26.07	4.114	26.47
Non-Reactivity	Pretest	21.67	2.498	22.93
	Posttest	23.67	3.177	24.80
	Follow-up	23.80	3.726	24.67
Illness Acceptance	Pretest	58.20	13.975	59.73
	Posttest	78.73	11.442	80.40

PWJ Psychology of Woman Journal
E-ISSN: 3041-8615

	Follow-up	78.53	12.744	78.93
Engagement in Activity	Pretest	36.07	10.984	37.13
	Posttest	49.40	7.586	49.93
	Follow-up	48.60	9.500	48.40
Willingness to Endure Illness	Pretest	22.13	10.162	22.60
	Posttest	29.33	8.006	30.47
	Follow-up	29.93	7.750	30.53

Based on descriptive findings, the mean scores of illness acceptance and dispositional mindfulness and their components in the EET and CFT groups increased more from pretest to posttest and follow-up than in the control group. Prior to performing repeated measures ANOVA, all necessary assumptions were evaluated. Despite equal sample sizes in all three groups, assumptions were checked to improve accuracy: normality of distribution (Shapiro-Wilk test), homogeneity of covariance matrices (Box's M test), sphericity (Mauchly's test), and homogeneity of variances (Levene's test).

Since p-values for all groups across all three time points were greater than .05, the variables (dispositional mindfulness, illness acceptance, and their components) were assumed to follow a normal distribution at the .05 significance level ($p > .05$). However, in the follow-up phase, the variable "acting with awareness" in the CFT group ($p = .041$) and "non-reactivity" in the EET group during the pretest ($p = .036$) were not normally distributed at the stricter .01 level ($p < .01$).

The assumption of homogeneity of covariance matrices was satisfied, as the significance level for this test across all variables and components was greater than .001. However, since Mauchly's test for sphericity yielded significance levels below .05 for dispositional mindfulness and illness acceptance, the sphericity assumption was violated. Therefore, the Greenhouse-Geisser correction was used in the repeated measures ANOVA for these variables.

The Levene's test confirmed the homogeneity of variances for dispositional mindfulness, illness acceptance, and their components ($p > .05$). Table 2 presents the results of within-subjects and between-subjects effects in the repeated measures ANOVA for illness acceptance and dispositional mindfulness and their components.

Table 2

Results of Within-Subjects and Between-Subjects Effects in Repeated Measures ANOVA

Variable	Source	SS	df	MS	F	p-value	Effect Size (η^2)	Power
Dispositional Mindfulness	Time	3542.237	1.651	2145.799	35.984	.0001	.461	.999
	Time × Group	1950.030	3.302	590.640	9.905	.0001	.320	.998
	Error (Time)	4134.400	69.333	59.631				
	Group	1845.635	2	922.817	7.852	.001	.272	.938
	Error	4935.956	42	117.523				
Observing	Time	136.993	1.725	79.397	13.656	.0001	.245	.994
	Time × Group	73.007	3.451	21.156	2.639	.013	.148	.817
	Error (Time)	421.333	72.468	5.814				
	Group	298.770	2	149.385	5.463	.008	.206	.822
	Error	1148.533	42	27.346				
Describing	Time	144.015	2	72.007	19.106	.0001	.313	.999
	Time × Group	86.074	4	21.519	5.710	.0001	.214	.975
	Error (Time)	316.578	84	3.769				
	Group	182.770	2	91.385	3.622	.035	.147	.638
	Error	1059.556	42	25.228				
Acting with Awareness	Time	154.178	1.522	101.300	13.718	.0001	.246	.990
	Time × Group	84.444	3.044	27.741	3.757	.015	.152	.792
	Error (Time)	472.044	63.924	7.384				
	Group	206.978	2	103.489	1.825	.174	.080	.359
	Error	2381.289	42	56.697				
Non-Judging	Time	297.170	1.607	184.892	14.790	.0001	.260	.995
	Time × Group	148.919	3.215	46.327	3.706	.014	.150	.803
	Error (Time)	843.911	67.505	12.501				
	Group	116.657	2	58.328	3.477	.040	.142	.619
	Error	704.563	42	16.775				
Non-Reactivity	Time	38.578	2	19.289	3.904	.024	.085	.690
	Time × Group	39.111	4	9.778	1.979	.105	.086	.572

PWJ Psychology of Woman Journal
E-ISSN: 3041-8615

	Error (Time)	414.978	84	4.940				
	Group	134.978	2	67.489	2.242	.119	.096	.431
	Error	1264.089	42	30.097				
Illness Acceptance	Time	4742.548	1.474	3238.634	81.540	.0001	.660	.999
	Time × Group	3463.185	2.947	1175.053	29.585	.0001	.585	.999
	Error (Time)	2458.267	61.892	39.718				
	Group	6291.659	2	3145.830	6.817	.003	.245	.901
	Error	19380.533	42	461.441				
Engagement in Activity	Time	2038.148	1.508	1351.555	68.751	.0001	.621	.999
	Time × Group	1106.741	3.016	366.956	18.666	.0001	.471	.999
	Error (Time)	1245.111	63.336	19.659				
	Group	2183.748	2	1091.874	3.340	.045	.137	.600
	Error	4576.785	42	108.971				
Willingness to Endure Illness	Time	581.881	1.406	413.945	19.072	.0001	.312	.998
	Time × Group	660.030	2.811	234.769	10.817	.0001	.340	.998
	Error (Time)	1281.422	59.039	21.705				
	Group	1064.281	2	532.141	3.334	.045	.137	.599
	Error	6704.044	42	159.620				

Given the violation of the Mauchly's sphericity assumption for the variables of dispositional mindfulness and illness acceptance, the conservative Greenhouse–Geisser correction was applied for repeated measures ANOVA on these variables. The results presented in Table 3 indicate significant within-group effects across time and time × group interaction for both dispositional mindfulness and illness acceptance ($p < .05$). The analysis demonstrated that dispositional mindfulness had a 46.1% effect size with a statistical power of 99.9%, and illness acceptance showed a 66.0% effect size, also with a power of 99.9%, indicating significant differences between the pre-test, post-test, and follow-up stages and their interaction with the three research groups.

Moreover, between-group effects were significant for both variables ($p < .01$), with 27.2% of the variance in dispositional mindfulness and 24.5% of the variance in illness acceptance attributed to group differences (two treatment groups vs. control).

In terms of the subcomponents, within-subjects effects were significant for observing, describing, acting with awareness, and non-judging, as well as all three components of illness acceptance ($p < .05$). Time × group interactions were also significant, indicating that changes over time differed between the groups.

For between-subjects effects, significant differences were observed among the three groups in observing, describing, and non-judging, as well as in all three dimensions of illness acceptance ($p < .05$). However, the between-group effects for acting with awareness and non-reactivity were not significant, indicating that the group means for these two subdimensions did not differ meaningfully across the intervention and control conditions.

Table 3

Bonferroni Post Hoc Test Results for Pairwise Group Comparisons on Dispositional Mindfulness, Illness Acceptance, and Their Components

Variable	Stage	Reference Group	Comparison Group	Mean Difference	Std. Error	p-value
Dispositional Mindfulness	Posttest	EET	CFT	-1.333	4.280	.999
		EET	Control	18.000*	4.280	.0001
		CFT	Control	19.333*	4.280	.0001
	Follow-up	EET	CFT	-1.000	4.418	.999
		EET	Control	19.133*	4.418	.0001
		CFT	Control	20.133*	4.418	.0001
Observing	Posttest	EET	CFT	0.400	1.203	.999
		EET	Control	4.200*	1.203	.003
		CFT	Control	3.800*	1.203	.009
	Follow-up	EET	CFT	0.667	1.312	.999
		EET	Control	4.600*	1.312	.003
		CFT	Control	3.933*	1.312	.014
Describing	Posttest	EET	CFT	-0.200	1.218	.999
		EET	Control	3.667*	1.218	.013
		CFT	Control	3.867*	1.218	.008
	Follow-up	EET	CFT	0.067	1.154	.999

PWJ Psychology of Woman Journal
E-ISSN: 3041-8615

		EET	Control	3.533*	1.154	.011
		CFT	Control	3.467*	1.154	.013
Acting with Awareness	Posttest	EET	CFT	-0.800	1.683	.999
		EET	Control	3.333	1.683	.163
		CFT	Control	4.133	1.683	.055
	Follow-up	EET	CFT	-0.467	1.690	.999
		EET	Control	3.533	1.690	.128
		CFT	Control	4.000	1.690	.068
Non-Judging	Posttest	EET	CFT	0.400	1.576	.999
		EET	Control	4.600*	1.576	.017
		CFT	Control	4.200*	1.576	.033
	Follow-up	EET	CFT	-0.400	1.636	.999
		EET	Control	5.267*	1.636	.007
		CFT	Control	5.667*	1.636	.004
Non-Reactivity	Posttest	EET	CFT	-1.133	1.347	.999
		EET	Control	2.200	1.347	.330
		CFT	Control	3.333	1.347	.052
	Follow-up	EET	CFT	-0.867	1.372	.999
		EET	Control	2.200	1.372	.349
		CFT	Control	3.067	1.372	.092
Illness Acceptance	Posttest	EET	CFT	-1.667	4.635	.999
		EET	Control	22.067*	4.635	.0001
		CFT	Control	23.733*	4.635	.0001
	Follow-up	EET	CFT	-0.400	4.896	.999
		EET	Control	20.933*	4.896	.0001
		CFT	Control	21.333*	4.896	.0001
Engagement in Activity	Posttest	EET	CFT	-0.533	3.762	.999
		EET	Control	13.267*	3.762	.003
		CFT	Control	13.800*	3.762	.002
	Follow-up	EET	CFT	0.200	4.048	.999
		EET	Control	12.133*	4.048	.014
		CFT	Control	11.933*	4.048	.016
Willingness to Endure Illness	Posttest	EET	CFT	-1.133	2.705	.999
		EET	Control	8.800*	2.705	.007
		CFT	Control	9.933*	2.705	.002
	Follow-up	EET	CFT	-0.600	2.723	.999
		EET	Control	8.800*	2.723	.007
		CFT	Control	9.400*	2.723	.004

The Bonferroni post hoc test results in Table 3 show that for illness acceptance and its components and for dispositional mindfulness and the components of observing, describing, and non-judging, there were statistically significant differences in mean scores between both treatment groups (Emotion Efficacy Therapy and Compassion-Focused Therapy) and the control group at both the post-test and follow-up stages ($p < .05$). However, there were no significant differences between the two treatment groups themselves ($p > .05$). For the components acting with awareness and non-reactivity, there were no significant differences in mean scores between any of the three groups at any stage.

Table 4

Bonferroni Post Hoc Test Results for Comparisons of Dispositional Mindfulness, Illness Acceptance, and Their Components

Variable	Stages	Mean Difference	Std. Error	Significance
Dispositional Mindfulness	Pretest - Posttest	-11.133*	1.678	.0001
	Pretest - Follow-up	-10.578*	1.598	.0001
	Posttest - Follow-up	.556	1.092	.999
Observing	Pretest - Posttest	-0.044	1.102	.999
	Pretest - Follow-up	-3.133*	1.102	.021
	Posttest - Follow-up	-3.178*	1.102	.019
Describing	Pretest - Posttest	-2.244*	.414	.0001
	Pretest - Follow-up	-2.133*	.384	.0001
	Posttest - Follow-up	.111	.429	.999

PWJ Psychology of Woman Journal
E-ISSN: 3041-8615

Acting with Awareness	Pretest - Posttest	.644	1.587	.999
	Pretest - Follow-up	2.244	1.587	.494
	Posttest - Follow-up	2.889	1.857	.228
Non-Judging	Pretest - Posttest	-3.222*	.755	.0001
	Pretest - Follow-up	-3.067*	.737	.0001
	Posttest - Follow-up	.156	.476	.999
Non-Reactivity	Pretest - Posttest	-1.111	.470	.068
	Pretest - Follow-up	-1.156	.492	.071
	Posttest - Follow-up	-0.044	.442	.999
Illness Acceptance	Pretest - Posttest	-12.733*	1.157	.0001
	Pretest - Follow-up	-12.489*	1.398	.0001
	Posttest - Follow-up	.244	.780	.999
Engagement in Activity During Illness	Pretest - Posttest	-8.556*	.902	.0001
	Pretest - Follow-up	-7.889*	.937	.0001
	Posttest - Follow-up	.667	.533	.654
Willingness to Endure Illness	Pretest - Posttest	-4.178*	.781	.0001
	Pretest - Follow-up	-4.600*	1.044	.0001
	Posttest - Follow-up	-.422	.578	.999

The Bonferroni post hoc results in Table 4 indicate that the mean differences in scores for dispositional mindfulness and its components, as well as illness acceptance and its components, were statistically significant between the pre-test and post-test and the pre-test and follow-up ($p < .05$). However, there were no significant differences between post-test and follow-up scores ($p > .05$). Based on these results, it can be concluded that both Emotion Efficacy Therapy and Compassion-Focused Therapy were effective in improving illness acceptance (and all its dimensions) as well as dispositional mindfulness, particularly in the observing, describing, and non-judging dimensions. Moreover, the effects of both treatments were maintained at the follow-up stage.

4. Discussion and Conclusion

The present study aimed to compare the effectiveness of Emotion Efficacy Therapy (EET) and Compassion-Focused Therapy (CFT) on dispositional mindfulness and illness acceptance in women with multiple sclerosis (MS). The results indicated that both interventions had a significant positive effect on dispositional mindfulness—excluding the "acting with awareness" and "non-reactivity" dimensions—and illness acceptance. Furthermore, no significant difference was observed between the effectiveness of the two interventions. These findings are consistent with previous studies (Andalib et al., 2023; Dammers, 2020; Jacobs et al., 2024; Masoudi et al., 2023; Sajadian & Motaharian, 2022).

Dispositional mindfulness, defined as the ability to be consciously present in the moment and to accept experiences without judgment, plays a critical role in reducing psychological stress and improving quality of life in MS patients. One of the most important dimensions of mindfulness is "observing," which refers to the ability to notice and be aware of internal and external experiences without judgment or the need to change them. Both therapeutic approaches, by enhancing attention to the present moment and facilitating non-judgmental observation of emotions and thoughts, help individuals gain deeper insight into their emotional experiences. In CFT, this observation is particularly tied to the development of self-compassion and compassion toward others. On the other hand, "describing" refers to the ability to express internal experiences in a clear, non-defensive manner (Johannsen et al., 2022). Both treatments enhance emotional self-awareness and assist individuals in articulating their emotional experiences more effectively. These approaches teach patients to accurately describe emotions and to confront, rather than avoid, them (Carvalho et al., 2022).

Another key component of mindfulness is "non-judging" of internal experiences. Both EET and CFT foster emotional acceptance, helping individuals view negative emotions as part of the human experience rather than something to be suppressed. By reducing self-criticism and judgment of others, these therapies promote improved interpersonal relationships and life satisfaction. The lack of significant effect on the dimensions of "acting with awareness" and "non-reactivity" may be attributed to specific characteristics of MS patients or the structure of the interventions. Due to physical and cognitive limitations, MS patients may face challenges in executing intentional behaviors or regulating emotional reactivity. Additionally, as both therapies primarily focus on emotional awareness and management, they may not adequately emphasize behavioral control and conscious decision-making. This finding aligns with Baer et

PWJ Psychology of Woman Journal
E-ISSN: 3041-8615

al. (2006), who noted that certain facets of dispositional mindfulness are less responsive to short-term interventions (Baer et al., 2006).

Regarding illness acceptance, the results showed significant improvement in both intervention groups. Illness acceptance involves acknowledging the reality of the illness without denial or psychological resistance, which in turn helps reduce psychological distress and improve adjustment (McCracken & Vowles, 2014). CFT, by enhancing self-compassion and reducing self-blame, and EET, by facilitating effective emotional processing, enabled patients to adapt to their illness. This finding is consistent with previous studies confirming the effectiveness of these interventions in promoting illness acceptance (Vidal & Soldevilla, 2023).

Willingness to endure illness is considered one of the components of illness acceptance. This concept reflects an individual's ability to face disease-related challenges without giving in. Both EET and CFT help patients develop a positive attitude toward these challenges and strengthen their willingness to tolerate the disease. This, in turn, supports better coping with the physical and emotional symptoms of MS. Another dimension of illness acceptance is "engagement in activity during illness." Given that both EET and CFT help patients adopt a more positive view of their abilities, these therapies teach individuals that physical limitations do not equate to a total loss of capability. Patients can continue engaging in daily activities by regulating emotions and accepting their limitations (Carvalho et al., 2022).

The lack of significant difference in the effectiveness between EET and CFT may be attributed to several factors. First, the two interventions share substantial theoretical and practical overlap. EET focuses on enhancing emotional regulation and increasing awareness of emotions, while CFT emphasizes cultivating self-compassion and accepting inner experiences. Both approaches promote self-awareness, reduce negative reactions to distressing experiences, and encourage acceptance of internal and external realities (Hofmann, 2018; Hofmann et al., 2010). These commonalities may explain their similar impact on dispositional mindfulness and illness acceptance. Second, both interventions are specifically designed to reduce psychological distress and improve emotional adjustment, which may account for their equivalent effectiveness. For instance, CFT works by reducing self-blame and enhancing a sense of shared humanity, while EET teaches emotional regulation skills—both facilitating better psychological coping in MS patients. These shared mechanisms likely contributed to comparable outcomes.

Third, the characteristics of the study population—namely, women with MS—may have influenced the lack of differential effects. Due to shared experiences such as chronic fatigue, physical limitations, and psychological distress, MS patients may respond similarly to interventions that focus on acceptance and emotional regulation. This is consistent with findings by Keng et al. (2011), which indicated that mindfulness- and compassion-based interventions yield comparable results in clinical populations facing similar challenges (Keng et al., 2011). Fourth, the structure of the interventions in this study, including the duration and intensity of sessions, may have allowed both treatments to reach their maximum potential effect, leaving no room for one to significantly outperform the other. In other words, both interventions may have reached their ceiling of effectiveness in this particular sample and timeframe.

5. Limitations and Suggestions

Among the major limitations of this study are its cross-sectional design, its geographical restriction to the city of Isfahan, and the inclusion of only female participants. Therefore, future studies are encouraged to include male participants and compare Emotion Efficacy Therapy with other therapeutic approaches.

Authors' Contributions

Authors contributed equally to this article.

Declaration

In order to correct and improve the academic writing of our paper, we have used the language model ChatGPT.

Transparency Statement

Data are available for research purposes upon reasonable request to the corresponding author.

Acknowledgments

We would like to express our gratitude to all individuals helped us to do the project.

Declaration of Interest

The authors report no conflict of interest.

PWJ
Psychology of Woman Journal
E-ISSN: 3041-8615

Funding

According to the authors, this article has no financial support.

Ethical Considerations

The study protocol adhered to the principles outlined in the Helsinki Declaration, which provides guidelines for ethical research involving human participants. This article is derived from the doctoral dissertation of the first author at the Islamic Azad University, Najafabad Branch, under ethics code IR.IAU.NAJAFABAD.REC.1403.056. Ethical standards were maintained throughout the research.

References

Alizadeh, M., Mahmoud Alilu, M., Bakhshipour, A., & Birami, M. (2023). The Effectiveness of Acceptance and Commitment Therapy on Emotional Dysregulation in Patients with Multiple Sclerosis: A Single Case Study. *Journal of Nursing Psychology*, *11*(4), 83-94. https://ijpn.ir/article-1-2228-fa.html

Amini, F., Zarei, H., Aghayousefi, A., & Hashemi, I. (2019). The impact of mindfulness on the decision-making style of Parsian Gas Refinery: The mediating role of self-reflection. *Knowledge and research in applied psychology*, *2IS - 12*, 57-83. https://journals.iau.ir/article_667684.html

Andalib, L., Rezaei, R., Emami, S., Ansari, M., & Shahidi. (2023). Razi Journal of Medical Sciences. *30*(4), 138-150. https://rjms.iums.ac.ir/article-1-7953-en.html

Baer, R. A., Smith, G. T., Hopkins, J., Krietemeyer, J., & Toney, L. (2006). Using self-report assessment methods to explore facets of mindfulness. *Assessment*, *13*(1), 27-45. https://doi.org/10.1177/1073191105283504

Carvalho, S. A., Skvarc, D., Barbosa, R. A. U. T. T., Santos, D., & Trindade, I. A. (2022). A pilot randomized controlled trial of online acceptance and commitment therapy versus compassion-focused therapy for chronic illness. *Clinical Psychology & Psychotherapy*, *29*(2), 524-541. https://doi.org/10.1002/cpp.2643

Dammers, M. A. (2020). *Self-criticism in the context of chronic illness* http://essay.utwente.nl/82401/

Dehghani, Z., Mardani, Z., & Rezvanian, H. (2024). The effectiveness of compassion-based therapy on improving treatment adherence and blood lipids (cholesterol, triglycerides, LDL, and HDL) in patients with type 2 diabetes. *Health Psychology*, *13*(50), 77-96. https://doi.org/10.30473/hpj.2024.67476.57

Dīnparast, A., Rasouli, N., & Qotb, A. (2023). Comparison of the Effects of Schema Therapy and Mindfulness Techniques on Sleep Disorders in Individuals with Multiple Sclerosis. *Journal of Islamic Lifestyle with a Focus on Health*, *7*(2), 257-267. https://www.sid.ir/paper/1135816/fa

Ebadi, S., & Babaei Kafaki, H. (2022). Comparison of the effectiveness of mindfulness-based cognitive intervention with metacognitive intervention on reducing anxiety symptoms and rumination in women with multiple sclerosis. *Journal of Applied Psychological Research*, *13*(2), 403-419. https://journals.ut.ac.ir/article_88617.html

Ebrahimi, S. A. U. A. K., & Farakhi, N. (2023). The Effectiveness of Supportive Therapy on Psychological Capital and Post-Traumatic Growth in Women with Multiple Sclerosis. *Journal of Applied Family Therapy*, *4*(1). https://ensani.ir/fa/article/544751/

Fooladi, A., Khademi, A., & Shaker Dolq, A. (2023). Comparison of the effectiveness of metacognitive therapy and compassion-based therapy on the level of cyberchondria symptoms in nurses. *Health Psychology*, *12*(46), 7-22. https://doi.org/10.30473/hpj.2023.65641.5655

Hofmann, S. G. (2018). *Cognitive-behavioral therapy: Principles and applications*. Tehran: Arjanman Publishing. https://www.amazon.com/Science-Cognitive-Behavioral-Therapy/dp/0128034572

Hofmann, S. G., Sawyer, A. T., Witt, A. A., & Oh, D. (2010). The effect of mindfulness-based therapy on anxiety and depression: A meta-analytic review. *Journal of consulting and clinical psychology*, *78*(2), 169-183. https://doi.org/10.1037/a0018555

Horesh, D., Glick, I., Taub, R., Agmon-Levin, N., & Shoenfeld, Y. (2017). Mindfulness-based. https://doi.org/10.1007/s40263-018-0489-5

Jacobs, B. M. A. U. T. P., Bestwick, J. P., Noyce, A. J., Marshall, C. R., Mathur, R., & Dobson, R. (2024). Modifiable risk factors for multiple sclerosis have consistent directions of effect across diverse ethnic backgrounds: a nested case-control study in an English population-based cohort. *Journal of Neurology*, *271*(1), 241-253. https://doi.org/10.1007/s00415-023-11971-0

Johannsen, M., Schlander, C., Farver-Vestergaard, I., Lundorff, M., Wellnitz, K. B., Komischke-Konnerup, K. B., & O'Connor, M. (2022). Group-based compassion-focused therapy for prolonged grief symptoms in adults-Results from a randomized controlled trial. *Psychiatry research*, *314*, 114683. https://doi.org/10.1016/j.psychres.2022.114683

Keng, S. L., Smoski, M. J., & Robins, C. J. (2011). Effects of mindfulness on psychological health: A review of empirical studies. *Clinical psychology review*, *31*(6), 1041-1056DO -. https://doi.org/10.1016/j.cpr.2011.04.006

Lee, B., McDaniels, B., & Grenawalt, T. A. (2023). Resilience as a moderator in the relationship between disability related stress and community participation in individuals with multiple sclerosis. *Psychology, Health & Medicine*, *28*(9), 2745-2755. https://doi.org/10.1080/13548506.2022.2072915

MaKay, M., & West, A. (2016). *Emotion efficacy therapy: A brief, exposure-based treatment for emotion regulation integrating ACT and DBT*. New Harbinger Publications. https://psycnet.apa.org/record/2016-49941-000

Masoudi, L., Shaygan Nejad, V., & Rahimi, R. (2023). Journal of Clinical Psychology and Personality. *21*(1), 73-84. https://cpap.shahed.ac.ir/?_action=article&au=32852&_au=%D8%B4%D8%A7%DB%8C%DA%AF%D8%A7%D9%86%20%D9%86%DA%98%D8%A7%D8%AF%D8%8C%20%D9%88%D8%AD%DB%8C%D8%AF

Mazloom, M., Mohammadi Khani, S., & Akbari, M. (2020). Comparison of cognitive-behavioral therapy and emotion-focused therapy in the psychological adjustment of women with breast cancer: The role of cognitive and emotional flexibility, values-based action, and illness perception as mechanisms of change, Kharazmi University.

McCracken, L. M., & Vowles, K. E. (2014). Acceptance and commitment therapy and mindfulness for chronic pain: Model, process, and progress. *American psychologist*, *69*(2), 178-187. https://doi.org/10.1037/a0035623

Mirmaeini, P., Bayazi, M., & Khalatbari, J. (2021). Comparison of the effects of acceptance and commitment therapy with compassion-focused therapy on the severity of anxiety and feelings of loneliness in patients with multiple sclerosis.

PWJ Psychology of Woman Journal
E-ISSN: 3041-8615

Journal of Knowledge Horizon, *27*(4), 534-549. https://doi.org/10.32598/hms.27.4.3426.1

Najafi, A., Mousavi-Pour, S., & Sajadi-Nejad, M. (2022). The effectiveness of a meaning-centered intervention program on general well-being, resilience, and quality of life in patients with multiple sclerosis. *Journal of Psychology Growth*, *11*(12), 85-96. https://frooyesh.ir/article-1-4272-fa.html&sw=%D9%85%D8%B9%D9%86%D8%A7%D8%AF%D8%B1%D9%85%D8%A7%D9%86%DB%8C

Nosrati, M., Moameni, M., Karami, M., & Mazdeh, M. (2018). The relationship between psychological capital and disease acceptance with life satisfaction in patients with multiple sclerosis. *Journal of Health and Care*, *20*(2), 114-122. https://doi.org/10.29252/jhc.20.2.114

Pourhaji, F., Jamali, J., Taraghdar, M. M., Peyman, N., & Tehrani, H. (2024). Design and validation of a Questionnaire on the factors influencing self-care behaviors in patients with Multiple sclerosis (QFASMS). *BMC Neurology*, *24*(1), 20. https://doi.org/10.1186/s12883-023-03522-x

Rostami, F., Vakilian, A., Esmaeilian, S., Jalali, N., & Tahernia, H. (2024). Epidemiology and Clinical Features of Multiple Sclerosis in Rafsanjan City, Kerman Province, Iran: A Cross-Sectional Study from 2011 to 2020.

Sajadian, M., & Motaharian, N. (2022). The effectiveness of emotional efficiency-based therapy on health-related quality of life, pain anxiety, pain acceptance, and emotional awareness in women with chronic low back pain. *Clinical Psychology Journal*, *14*(2), 23-31. https://www.sid.ir/paper/1114893/fa

Spek, A. A., Van Ham, N. C., Nyklíček, I., Hawes, J., & Sweeny, K. (2013). Mindfulness-based therapy in adults with an autism spectrum disorder: a randomized controlled trial Mindfulness. *Research in Developmental Disabilities*, *34*(1), 246-253. https://doi.org/10.1016/j.ridd.2012.08.009 10.1016/B978-0-323-91497-0.00090-4

Vidal, J., & Soldevilla, J. M. (2023). Effect of compassion-focused therapy on self-criticism and self-soothing: A meta-analysis. *British Journal of Clinical Psychology*, *62*(1), 70-81. https://doi.org/10.1111/bjc.12394

Walton, C., King, R., Rechtman, L., Kaye, W., Leray, E., Marrie, R. A., & Baneke, P. (2020). Rising prevalence of multiple sclerosis worldwide: Insights from the Atlas of MS. *Multiple Sclerosis Journal*, *26*(14), 1816-1821. https://doi.org/10.1177/1352458520970841

PWJ
Psychology of Woman Journal
E-ISSN: 3041-8615