

The Effectiveness of Emotion Focused Group Therapy (EFT) on Rumination and Emotional Expression in Patients with Multiple Sclerosis

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ABSTRACT

Objective: Multiple sclerosis is a progressive neurological disease. It has both negative and positive impacts on the physical and mental health of patients. The aim of this study was to investigate the effectiveness of emotion-focused group therapy on emotional expressivity and rumination in patients with multiple sclerosis in Shiraz.

Methods and Materials: The population of this study consisted of all patients with MS in Shiraz in 2021, diagnosed according to the 2017 McDonald criteria by a neurologist. After identifying MS patients, thirty who met the research entry criteria were purposively selected and randomly assigned to an experimental group and a control group in equal numbers. The experimental group underwent emotion-focused therapy sessions for eight 90-minute sessions while the control group remained on a waiting list. The data were obtained using the Nolen-Hoeksema and Morrow (1991) rumination scale and the King and Emmons (1962) emotional expressivity questionnaire. Descriptive and inferential statistics (repeated measures analysis of variance) were used in data analysis.

Findings: Data analysis showed that after the intervention, there was a significant difference between the control and experimental groups in both variables of emotional expressivity and rumination ($P < 0.05$). Significant differences in components of emotional expressivity (expression of positive emotion, expression of intimacy, and expression of negative emotion) and components of rumination (rumination responses and distraction responses) were observed between patients with multiple sclerosis in the experimental and control groups ($P < 0.05$).

Conclusion: The use of emotion-focused therapy is an appropriate intervention for improving emotional expressivity and rumination in patients with multiple sclerosis and can be used to improve psychological status and better cope with the disease.

Keywords: Emotional expressivity, rumination, emotion-focused therapy, multiple sclerosis

1. Introduction

Multiple sclerosis, like other autoimmune diseases, entails numerous physical and psychological complications (Johnson et al., 2020). This disease is more prevalent in the Indian and European races compared to others, while less common in Black and Asian populations. Given that the Iranian race is a branch of the Indian and European races, it's essential to further investigate this disease and strategies to combat its physical and psychological effects (Aghabgloo & Keramati Moghadam, 2022). The importance of addressing psychological issues in MS can be argued in that during the illness, psychological factors and physical symptoms are often interrelated, impacting the progression and outcome of the disease (Ghafoori et al., 2020). Thus, as much as symptom relapse can improve patients' mental states, psychological factors can also reduce symptoms and facilitate improvement (Bassi et al., 2021). Currently, this disease has reached individuals under 20 years and is increasingly prevalent among women, with a ratio twice that of men. MS generally affects young and adult individuals, with approximately 2.5 million people worldwide being affected (Aghabgloo & Keramati Moghadam, 2022). Research shows significant psychological distress associated with MS (McPhee, 2018).

One factor that plays a role during the experience of stressful diseases and negative emotions is emotional expressivity. Emotional expressivity seems to be an important factor in MS. Emotional expressivity plays a crucial role in psychosomatic health and quality of life and can significantly impact coping with trauma and growth (Zeinali Siyavashani & dehghan, 2021). Emotional expressivity significantly affects interpersonal relationships (Raime, 2017), and individuals who express their emotions experience fewer psychological disorders (Vahdani et al., 2020). Emotionally competent individuals recognize their emotions, understand the implicit meanings, and express their emotional states more effectively to others. Compared to individuals lacking the skill to appropriately express their emotions, they are more successful in dealing with negative experiences and show better adaptation in relation to their environment and others (Mahmoudpour et al., 2021). Individuals differ in their emotional expression; some express emotions freely without concern for consequences, while others are conservative in conveying emotional states (McNeil & Repetti, 2018). Some do not express emotions but are comfortable, yet others become tense when restraining their emotions, facing the risk of psychological

turmoil and potential physical problems, often ruminating over distressing emotions (Kazemi Zahrani et al., 2019). Emotional expressivity is the verbal and non-verbal expression that a person displays in emotionally focused situations (Yedirer & Hamarta, 2015). Kring, Smith, and Nial (1994) define emotional expressivity as the external display of emotion, regardless of value (positive or negative) or method (verbal or bodily). From a psychoanalytic perspective, repressed emotions enter the semi-conscious and unconscious parts of the mind structure, negatively affecting the person's future relationships (Feist, Feist & Roberts, 2021).

Another issue that MS patients suffer from is rumination, known as resistant and recurring thoughts revolving around a common theme, distracting attention from desired topics and current goals. Numerous studies suggest a close relationship between rumination and various emotional disorders (Rabiani & Mojtabai, 2019). These patients, focusing more on life's stressors, develop inefficient thoughts, primarily past-oriented and leading to repetitive negative self-focused thoughts, known as rumination (Tumminia et al., 2020). Rumination is defined as repetitive thoughts about experiences related to emotions (Kovács et al., 2020) and includes passive thoughts focused on causes, consequences, and symptoms (Andalib et al., 2020), typically being a regressive behavior lasting for an extended period (Hetrick et al., 2015). Developmental studies show that ruminative response styles develop and solidify during the transition from childhood to adulthood (Shaw et al., 2021). During rumination, individuals engage in exaggerated assessments of the likelihood of negative events and their responsibility in creating or preventing catastrophic outcomes, attempting to control these thoughts (Khedri et al., 2022).

One of the treatments that can help regulate thoughts and actions for better communication, problem-solving skills, and symptom management is the emotion-focused approach (Sanagoi Moharrar et al., 2019). Emotion-focused therapy effectively centers and focuses on emotions (Asmari Bardehward et al., 2017). This therapy is a short-term, evidence-based treatment. In emotion-focused therapy, emotional change is considered at the core, and addressing patients' issues is taken into account (Greenberg, 2010). It suggests that certain human emotions have an inherent adaptive quality and, when activated, can help clients change problematic emotional states or unwanted experiences (Asmari Bardehward et al., 2017). Emotion-focused therapy involves three stages: identification of emotion (explaining

the relationship between emotions and overlooked experiences with symptoms to patients), regulation of emotion (enhancing control over negative emotions and confidence in recovery), and behavioral actions (changing emotion based on emotion) (Khayeri et al., 2019). Emotion regulation refers to a set of mental processes that affect emotions and how they are experienced and expressed. It is a dynamic internal process for human mental functioning, aiming to reduce or regulate positive or negative emotions to achieve desirable states (Montana et al., 2020). Aldao et al. (2014) in expanding theories related to emotion regulation interventions, stated that disruption and turmoil in emotions and their regulation, due to their intrinsic importance in people's lives, will have multiple pathogenic consequences (Aldao et al., 2014). Lack of adaptive cognitive emotion regulation is associated with reduced psychological well-being, inappropriate social relationships, and inability to manage and control stressful life situations (Sekhavati et al., 2021). Research conducted so far indicates the effectiveness of emotion-focused therapy on rumination (Khayeri et al., 2019; Khodabandehlu et al., 2021; Teymouri et al., 2020) and emotional expressivity (Ahmadi Bajestani et al., 2018). The present study examines the application of emotion-focused psychotherapeutic methods on patients with multiple sclerosis, investigating whether emotion-focused group therapy is effective in improving emotional expressivity and rumination in patients with multiple sclerosis in Shiraz.

2. Methods and Materials

2.1. Study Design and Participants

This study was a quasi-experimental research, conducted using a non-equivalent group design (experimental and control) with pre-test and post-test. The study population consisted of all patients with MS in Shiraz in 2021, diagnosed based on the 2017 McDonald criteria by a neurologist. The sample for this study was selected from the study population using purposive sampling, considering the inclusion and exclusion criteria (Inclusion criteria for participants: minimum education of high school diploma, age between 30 and 40 years, informed consent to participate in the study, patients with relapsing-remitting MS, and an Expanded Disability Status Scale (EDSS) score of ≤ 5.5 . Exclusion criteria: presence of psychiatric disorders requiring immediate treatment such as symptoms of psychosis and substance dependence). After identifying MS patients, 30 individuals who met the inclusion criteria were

identified and randomly assigned to an experimental group and a control group. For experimental and quasi-experimental research, a minimum sample size of 15 individuals per group is recommended. After selecting the sample individuals, they were briefed about the subject, therapy sessions, and their objectives, and it was emphasized that participation in the therapy sessions was voluntary and without any compulsion.

2.2. Measures

2.2.1. Emotional Expressivity

This questionnaire was designed by King and Emmons (1962) to investigate the role of emotional expression in health. It consists of three subscales: expression of positive emotion, expression of intimacy, and expression of negative emotion, totaling 16 items. Responses to the questions are on a 5-point scale (ranging from strongly disagree to strongly agree). King and Emmons (1990) reported a Cronbach's alpha coefficient of 0.70 for this questionnaire and found significant concurrent validity between the Emotional Expressivity Questionnaire, Multidimensional Personality Questionnaire, and Positive Affect Scale. Rafieinia (2006) reported the overall reliability of the questionnaire using internal consistency and Cronbach's alpha of 0.68, and the reliability of the subscales of positive emotional expression, expression of intimacy, and negative emotional expression as 0.65, 0.59, and 0.68, respectively. In the research by Hassani and Bemani Yazdi (2015), the alpha coefficient for the subscales of positive emotional expressivity, expression of intimacy, and negative emotional expressivity, and the total scale were 0.76, 0.74, 0.82, and 0.78, respectively (Vahdani et al., 2020).

2.2.2. Rumination

This questionnaire was developed by Nolen-Hoeksema and Morrow (1991). It assesses negative mood responses and consists of two subscales: rumination responses and distraction responses, each containing 11 items. The questionnaire has 22 items and is scored on a Likert scale from 1 (never) to 4 (often). Based on empirical evidence, the reliability of the questionnaire using Cronbach's alpha as 0.92 and its validity using correlation as 0.67 (Rabiani & Mojtabaii, 2019).

2.3. *Intervention*

2.3.1. *Emotion-Focused Group Therapy*

EFGT Protocol: The therapy method was based on the model presented by Greenberg (2010) (Greenberg, 2010) and was adapted by the researcher for patients with MS.

In the Emotion-Focused Therapy sessions for patients with Multiple Sclerosis (MS), the first session is dedicated to establishing communication, explaining the nature of MS, and conceptualizing Emotion-Focused Therapy. The second session focuses on identifying distress and anxiety, particularly concentrating on the emotional components of problematic experiences in MS patients. The third session aims to evoke and enliven the patients' painful emotions or feelings. In the fourth session, the therapy delves into accessing underlying primary emotions and recognizing unaddressed needs, bringing them to consciousness. The fifth session involves demanding the need which the patient is avoiding and validating previously unmarked or avoided experiences. The sixth session expands the concept of self by reconstructing emotions in relation to various situations. The seventh session sees the therapist aligning with the

necessity of internal resources, generalizing, and transferring these feelings beyond the therapy sessions. The eighth and final session involves reflecting on the progress made, developing a new narrative of the patients' experiences, expressing metaphors of the previous and new states of the self, and completing the post-test. This structured approach in Emotion-Focused Therapy aims to address the specific emotional and psychological needs of MS patients, aiding in their overall mental health and coping strategies.

2.4. *Data analysis*

The analysis of the data obtained from the questionnaires was carried out using SPSS software version 24, in two parts: descriptive and inferential (repeated measures analysis of variance).

3. **Findings and Results**

The descriptive indices (mean and standard deviation) of rumination scores in the experimental group (treatments based on EFGT (EFT)) and the control group at pre-test, post-test, and follow-up stages are presented.

Table 1

Descriptive Indices (Mean and Standard Deviation) of Various Variables

Group	Variable	Index	Pre-test	Post-test	Follow-up
EFT Group	Rumination Responses	Mean	23.67	17.07	17.33
		Standard Deviation	2.69	2.79	2.89
Control Group		Mean	23.60	23.87	23.60
		Standard Deviation	2.64	2.75	2.56
EFT Group	Distraction Responses	Mean	22.47	17.67	18.47
		Standard Deviation	3.14	2.97	2.26
Control Group		Mean	22.80	22.40	22.53
		Standard Deviation	2.51	2.61	3.18
EFT Group	Positive Emotional Expression	Mean	16.73	22.33	23.07
		Standard Deviation	3.37	1.88	1.83
Control Group		Mean	17.27	16.53	17.53
		Standard Deviation	4.45	4.29	4.12
EFT Group	Intimacy Expression	Mean	13.53	19.47	20.47
		Standard Deviation	4.85	3.27	3.27
Control Group		Mean	13.87	13.20	12.93
		Standard Deviation	3.02	2.78	2.02
EFT Group	Negative Emotional Expression	Mean	17.73	12.93	12.07
		Standard Deviation	3.39	3.86	4.01
Control Group		Mean	16.53	16.33	17.47
		Standard Deviation	3.78	5.60	5.62

As observed, the mean in the EFGT group shows a decrease in the post-test stage compared to the pre-test. According to the results in Table 1, it can be described that

EFGT has led to a reduction in rumination components and an improvement in emotional expressivity components in patients with multiple sclerosis.

Table 2

The Results of Analysis of Variance for Emotional Expressivity

Variable	Source	SS	df	MS	F	p	Eta ²
Positive Emotional Expression	Within-group	175.62	1.61	109.43	18.49	0.001	0.40
	Group*Time	192.47	1.61	119.92	20.27	0.001	0.42
	Between-group	291.60	1.00	291.60	10.72	0.001	0.28
Intimacy Expression	Within-group	160.69	1.18	135.82	27.16	0.001	0.49
	Group*Time	267.62	1.18	226.21	45.23	0.001	0.62
	Between-group	453.38	1.00	453.38	16.78	0.001	0.38
Negative Emotional Expression	Within-group	118.69	1.15	103.27	9.40	0.001	0.25
	Group*Time	171.80	1.15	149.48	13.61	0.001	0.33
	Between-group	144.40	1.00	144.40	4.06	0.03	0.13

The results in Table 2 indicate that the calculated F-value for the within-group factor regarding the effect of stages (pre-test, post-test, and follow-up) is significant at the 0.05 level for the components of emotional expressivity ($P < 0.05$). Therefore, there is a significant difference between the mean scores of the pre-test, post-test, and follow-up stages for the components of emotional expressivity. The results of the Bonferroni post-hoc test, conducted to examine differences between means at different treatment stages, showed that there is a significant difference between the components of emotional expressivity in the pre-test compared to the post-test and the pre-test compared to the follow-up ($P < 0.05$). Additionally, there is no significant difference between the components of emotional expressivity in the post-test stage compared to the follow-up stage, indicating that the components of emotional expressivity did not significantly

change from the post-test to the follow-up stage ($P > 0.05$). Considering the results of Table 2 in relation to the interaction of stage and group factors, the calculated F-value for the effect of stages (pre-test, post-test, and follow-up) between the two groups focused on emotion and control is significant at the 0.05 level for the components of emotional expressivity ($P < 0.05$). Hence, there is a significant difference between the mean scores of the pre-test, post-test, and follow-up stages for the components of emotional expressivity in both groups. According to the results of Table 3 for the between-group factor, the calculated F-value at the 0.05 level for the components of emotional expressivity is significant ($P < 0.05$). Therefore, there is a significant difference between the overall mean scores of the components of emotional expressivity in the two groups focused on emotion and the control group.

Table 3

The Result of Analysis of Variance for Rumination

Variable	Source	SS	df	MS	F	p	Eta ²
Rumination Responses	Within-group	200.56	1.80	111.72	30.53	0.001	0.52
	Group*Time	218.87	1.80	121.92	33.32	0.001	0.54
	Between-group	422.50	1.00	422.50	26.97	0.001	0.49
Distraction Responses	Within-group	115.29	1.76	65.62	30.54	0.001	0.52
	Group*Time	84.36	1.76	48.02	22.35	0.001	0.44
	Between-group	208.54	1.00	208.54	10.56	0.001	0.27

The results of Table 3 show that the calculated F-value for the within-group factor regarding the effect of stages (pre-test, post-test, and follow-up) is significant at the 0.05 level for the components of rumination responses and distraction responses ($P < 0.05$). Therefore, there is a significant difference between the mean scores of the pre-test, post-test, and follow-up stages for the components of rumination responses and distraction responses. The results of the Bonferroni post-hoc test, conducted to examine

differences between means at different treatment stages, revealed that there is a significant difference between the scores of the components of rumination responses and distraction responses in the pre-test compared to the post-test, and the pre-test compared to the follow-up ($P < 0.05$). Furthermore, there is no significant difference between the scores of the rumination components in the post-test stage compared to the follow-up stage, indicating that the scores of the components of rumination responses and distraction

responses did not significantly change from the post-test to the follow-up stage ($P>0.05$). Considering the results of Table 3 in relation to the interaction of stage and group factors, the calculated F-value for the effect of stages (pre-test, post-test, and follow-up) between the two groups focused on emotion and control is significant at the 0.05 level for the components of rumination responses and distraction responses ($P<0.05$). Hence, there is a significant difference between the mean scores of the pre-test, post-test, and follow-up stages for the components of rumination responses and distraction responses in both groups. According to the results of Table 4 for the between-group factor, the calculated F-value at the 0.05 level for the components of rumination responses and distraction responses is significant ($P<0.05$). Therefore, there is a significant difference between the overall mean scores of the components of rumination in the two groups focused on emotion and the control group.

4. Discussion and Conclusion

This study aimed to investigate the effectiveness of EFGT (EFT) on emotional expressivity and rumination in patients with multiple sclerosis in Shiraz. The results of statistical data analysis indicated that EFGT effectively impacts emotional expressivity and its components in patients with multiple sclerosis in Shiraz, with this effectiveness persisting in the follow-up stage. These findings align with results from previous research (Ahmadi Bajestani et al., 2018; Sekhavati et al., 2021; Teymouri et al., 2020). In explaining the effectiveness of EFGT (EFT) on emotional expressivity (positive emotion expression, intimacy expression, negative emotion expression) in patients with multiple sclerosis in Shiraz, it can be stated that this approach, by focusing on the proper and appropriate release of emotions, stabilizing individual attachment styles, and reducing emotional and anxiety-related issues, enhances the physical health of group members. In this approach, individuals learn to understand and talk about their feelings and emotions. Additionally, this approach, by targeting individual emotions and analyzing them, can play a significant role in improving emotions and their expression in patients with chronic diseases like multiple sclerosis. Emotional expressivity includes dimensions such as the expression of positive and negative emotions and intimacy, thus providing a context in which individuals in the group can comfortably talk about their emotions, facilitating emotional expressivity and thereby reducing conflicts in

patients with multiple sclerosis due to lack of emotional expression (Ahmadi Bajestani et al., 2018). Overall, it can be said that Emotion-Focused Therapy is used to overcome emotional problems and helps individuals change and improve by adding to their emotional knowledge and working with them instead of against their emotions. In this therapy, individuals learn to effectively focus on and concentrate on their emotions, experiencing their emotions without fear of punishment or retribution, accepting their contradictory aspects, and being able to express their various emotions. Moreover, in explaining the greater effectiveness of EFGT on emotional expression, it can be said that Emotion-Focused Therapy considers emotional change at the source and center of treating patients' problems, emphasizing emotional processing. This therapy helps individuals to change problematic emotional states or unwanted experiences (Asmari Bardehward et al., 2017; Khodabandehlu et al., 2021). Emotion-Focused Therapy is conducted in three stages: identifying emotions, regulating emotions, and behavioral actions, and in these stages, by explaining the relationship between emotions and overlooked experiences with their symptoms, enhancing control over negative emotions, and confidence in their recovery, and changing their emotions based on positive emotions and expressing their emotions, individuals can have more emotional expressivity and experience more intimacy with others (Khayeri et al., 2019; McNeil & Repetti, 2018). Therefore, it can be expected that this therapy, due to its greater focus on emotions, will be more effective on emotional expressivity. In fact, in this therapy, the therapist establishes an empathetic relationship and facilitates emotional change in the client using experiential tasks and throughout the intervention, changing primary and secondary incompatible emotions to primary compatible emotions, and using this method to facilitate emotional expressivity.

Additionally, the results showed that EFGT is effective on rumination and its components in patients with multiple sclerosis in Shiraz, and this effectiveness was sustained in the follow-up stage. This finding is consistent with previous research results (Khayeri et al., 2019; Khodabandehlu et al., 2021; Teymouri et al., 2020). In explaining the effectiveness of EFGT (EFT) on rumination (rumination responses, distraction responses) in patients with multiple sclerosis in Shiraz, it can be said that the use of techniques such as identifying conflicting feelings, placing patients in the empty chair dialogue situation, relaxation, breaking the feeling of incompleteness, describing the voice state and the

level of distress, and teaching the transfer process in Emotion-Focused Therapy has caused patients to show a greater reduction in the severity of rumination (Khayeri et al., 2019; Teymouri et al., 2020). In Emotion-Focused Therapy sessions, after patients understand, process, and regulate their emotions without avoidance in a safe therapeutic environment, they ultimately use fewer conclusive thoughts such as rumination to avoid them. Following this path, their anxiety decreases, and their self-esteem is enhanced, contributing to improved mood and natural affect. This leads to a reduction in incompatible self-talk in stressful situations and the development of relatively optimistic interpretation pathways, especially when faced with various harmful situations. In EFT, participants are encouraged to question their distressing thoughts and eliminate self-talk that causes psychological turmoil due to rumination. Furthermore, in explaining the uniform effectiveness of EFGT and reality therapy on rumination and its components, it can be said that both treatments emphasize a mindful and reality-based approach to free oneself from rumination, a mind that is planning, equipping internal and external forces to achieve suitable goals like relaxation and avoidance of stress and worry. Both approaches focus on active personal efforts to change ineffective and unrealistic behavioral and emotional patterns, so it is natural that both approaches equally impact the improvement of rumination. On the other hand, it can be said that due to the experience of some common factors in both group therapies, such as the opportunity to participate in the group, sharing thoughts and feelings, establishing human connections, and effective and beneficial self-disclosure, both approaches have had a similar impact. Also, therapeutic differences due to treatments may become apparent in the long term, which requires long-term follow-ups.

5. Limitations & Suggestions

Given that the statistical population of this study was a small part of the community, consisting of a small group of patients with multiple sclerosis over a specific and limited period, care should be taken when generalizing findings to other community members. In this study, the only tool used was a questionnaire, which can be subject to inaccuracies, impatience, or personal perceptions of the subjects. Since Emotion-Focused Therapy has had positive results both in preventing the onset of emotional-psychological injuries and in treating many psychological disorders, including emotional non-disclosure, difficulty in emotional

expressivity, anxiety, rumination, and psychological distress, and is an integral part of life for individuals with chronic diseases such as multiple sclerosis, it is recommended that through mass media and with the help of experienced experts, this treatment be taught as a public program. Considering the greater effectiveness of Emotion-Focused Therapy on emotional expressivity, it is suggested that therapists and counselors working in MS centers and associations dealing with patients with multiple sclerosis who have difficulties in emotional expressivity undergo training in the concepts of this intervention and provide conditions for them to make the most of this treatment in the therapy room for these patients.

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Declaration of Interest

The authors of this article declared no conflict of interest.

Ethics Considerations

The study protocol adhered to the principles outlined in the Helsinki Declaration, which provides guidelines for ethical research involving human participants.

Transparency of Data

In accordance with the principles of transparency and open research, we declare that all data and materials used in this study are available upon request.

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Authors' Contributions

Mandana Farsi contributed to the conceptualization of the research, participant recruitment, data collection, and the drafting and revision of the manuscript. Ali Mohammad Rezaei played a key role in the design of the study, statistical analysis, and interpretation of the results. Maryam Poursadegh Fard assisted in participant recruitment, data collection, and the literature review. All authors reviewed and approved the final manuscript for publication.

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