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Effectiveness of Desensitizing Treatment with Eye Movements and Reprocessing and Acceptance and Commitment Therapy on Emotional Expression and Somatic Symptoms

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Abstract

Background: The phenomenon of female-headed households is a social reality that has different reasons and is found in all societies.

Objectives: This study aimed to compare the effectiveness of Eye Movement Desensitization and Reprocessing Therapy (EMDR) and Acceptance and Commitment Therapy (ACT) on emotional expression and somatic symptoms among female-headed households.

Materials and Methods: This semi-experimental study was conducted based on a pretest-post-test control group design and follow-up. The statistical population of this study consisted of all female-headed households in Tehran, Iran, in 2019, among whom 36 cases were selected using the convenience sampling method. The samples were divided into 3 groups (n=12 each), including the group treated with EMDR, the group treated with ACT, and the control group (awaiting treatment). The required data were obtained using the Emotional Expression Questionnaire and Patient Health Questionnaire. The collected data were analyzed in SPSS software (version 22) using repeated variance analysis and Bonferroni post hoc test.

Results: The results showed that EMDR and ACT were effective in emotional expression ($P<0.01$) and physical symptoms ($P<0.01$) among female-headed households.

Conclusion: It can be concluded that EMDR and ACT were effective on emotional expression and physical symptoms in female-headed households and these two treatments can be used to improve the problems of female-headed households.

Keywords: Eye movement desensitization reprocessing, Acceptance and commitment therapy, Desensitization

Introduction

The phenomenon of female-headed households is a social reality that has different reasons and is found in all societies. Based on the data in the censuses of 1996-2006, the rate of female-headed households in the whole country (i.e., Iran) has increased from 8.4% to 9.4% and 12.7% in 2016 (1). Female-headed households face such problems as fear and concern for themselves and their children and legal restrictions. The negative attitude of society toward the remarriage of these women, conflict with the family of spouses, and insecurity of society are among the factors that these women face in their daily lives (2). Psychologists believe that female-headed households have problems both materially and psychologically and emotionally, experience more stress and anxiety, and are among the most vulnerable strata in society (3). A large group of female-headed households is faced with poverty, disability, and powerlessness, especially regarding the administration of household economic affairs; consequently, these problems impair their self-esteem and provide the ground for other disorders (3). In this study, among several psychological variables that play a role in the incidence of psychological symptoms and disorders of this group of women, emotional expression, traumatic memory symptoms, and physical symptoms were investigated. Emotional expression is one of the factors affecting people's health and psychological well-being (4). Emotional expression, as one of the main components of emotion, is the degree to which a person actively expresses his emotional experiences in the form of verbal and nonverbal behaviors; examples of emotional expression include facial movements, such as smiling and frowning, or such behaviors as crying or laughing (5). King and Emmons (6) have defined expression as an outward representation of an emotion, regardless of its value (positive or negative) or its manner of expression (facial, verbal, and physical or behavioral states). In their view, the expression of emotions in itself is not a factor for

health, rather it is a person's underlying feeling about self-expression that can determine its usefulness or harmfulness (7).

On the other hand, evidence has been obtained that avoidance of internal experiences that are evaluated for a hateful person and can be experienced and memories related to a traumatic event are associated with physical symptoms (8). Moreover, researchers have shown that the suppression of emotional expression is associated with increased somatization (physical occurrence of mental disorders) and maintenance of emotional expression in patients with physical symptoms (9). There is a lot of evidence that difficulty in identifying and expressing emotions is associated with numerous physical health problems, such as inflammatory bowel disease, chronic back pain, body pain disorder, and tension headaches. Therefore, another factor affecting people's psychological problems is physical complaints and symptoms (e.g., heart palpitations and dizziness) (10).

Physical symptoms that are often reported include fatigue, low energy, cramps, dizziness, feeling weak, heart pressure, shortness of breath, sleep problems, and pain (e.g., back pain, abdominal pain, chest pain, stomach ache, and headache) (11). Physical symptom disorder is usually associated with other mental disorders, such as depression, anxiety, low mental health, and psychological problems. In terms of psychological personality, physicians describe people with somatization disorders as task-dedicative people, even obsessive, sensitive, unsafe, and anxious. Clinical observations over the last two centuries have shown that somatization disorder is related to intense emotions or situations that threaten a person's physical or psychological integrity (12).

The eye movement desensitization and reprocessing (EMDR) treatment process involves regular desensitization through eye movements and reprocessing and recalling early, rooted, and effective experiences that have been shown to have a profound impact on cognitive-emotional processing of negative information caused by traumatic events (13). This treatment involves elements of exposure therapy and cognitive behavioral therapy combined with eye movement techniques, hand trauma, and auditory stimulation; moreover, it helps the patient to release past trauma from his/her nervous system by natural processing of emotional information (14). Therefore, EMDR is an injury-focused treatment that includes the elements of other effective psychotherapies (13). This treatment requires focus and simultaneous visual pursuit of the movement of the therapist's finger in the visual field, followed by memory reconstruction (15).

One of the other treatments that has shown its effectiveness in various pieces of research is the ACT. In this treatment, it is assumed that humans find numerous of their feelings, emotions, or inner thoughts disturbing and are constantly trying to change or get rid of these inner experiences. It is unaffected to try to control them and would paradoxically lead to the exacerbations of emotions, feelings, and thoughts that one initially tried to avoid (16). The ACT model, which helps clients to experience fears that they avoid and includes a person's involvement in strategies to change the experience of private events, is a process underlying various types of mental disorders (17).

Considering that most studies with the EMDR method have mainly focused on people suffering from posttraumatic stress disorder, it seemed helpful to conduct a study about the usefulness of this method in other diseases, especially regarding people's emotional expression and physical symptoms. Considering what has been stated and the importance of our subject in this study, the researchers compared and determined the effectiveness of EMDR therapy and ACT on emotional expression, traumatic memory symptoms, and physical symptoms among female-headed households.

Objectives

This study aimed to compare the effectiveness of EMDR therapy and ACT on emotional expression and somatic symptoms in female-headed households.

Materials and Methods

This semi-experimental study was conducted with a pretest-posttest control group design and a three-month follow-up. The statistical population of this study consisted of all female-headed households in Tehran, Iran, in 2019, among whom 36 cases were selected as samples using the convenience sampling method. The samples were divided into 3 groups (n=12 each), including the group treated with EMDR, the group treated with ACT, and the control group (awaiting treatment). The required sample size was calculated at 36 in total based on the effect size = 0.40, $\alpha = 0.95$, $1-\beta$ (err prob) = 0.80 test power, and 10% drop-out rate in each group.

The treatments were performed in both groups individually in the New Insight Counselling Center in Tehran, and the participants cooperated until the end of the study. The treatment was administered by the researcher, neither group received any other treatment, and the control group did not receive any treatment. The treatment lasted for 3 months from November to January 2019. It should be noted that a pre-test and post-test were taken from all subjects in the three groups at the baseline and after the treatment, respectively. To evaluate the effect of the treatments and measure the interventions, participants were reassessed 2 months after the end of the study. The treatments were administered weekly in eight 90-minute sessions for each

experimental group.

The inclusion criteria were non-receiving concurrent treatments, giving informed consent to participate in the treatment, lacking substance abuse, having enough time, coordinating with the researcher to participate in treatment sessions, having minimum secondary education, and being aged 25-50 years (since most clients were in this age range, this age group was chosen in this study). On the other hand, the patients who did not attend more than four sessions and were reluctant to continue intervention sessions were excluded from the research. Regarding the ethical considerations, the research objectives and procedures were explained to all individuals in written form, and they were informed of the right to leave the study at any time. Moreover, all participants were assured of anonymity and confidentiality in this study. This research was approved by the Ethics Committee of Islamic Azad University, Shahrood Branch, Shahrood, Iran (IR.IAU.SHAHROOD.REC.1399.086).

Emotional Expression Questionnaire

This 16-item questionnaire, developed by King and Emmons (1990), assesses the importance of the role of emotional expression in health (6) in 3 subscales. The responses are scored on a 7-point Likert scale from perfectly agreeable to opposite (6). King and Emmons (6) calculated the reliability of the instrument and the subscales at 0.70, 0.74, 0.63, and 0.67, respectively, using Cronbach's alpha coefficient method. Basharpour et al. (18) investigated the validity of this scale using the internal consistency method and obtained Cronbach's alpha coefficients for the whole scale and subscales of positive emotion expression, intimacy, and negative emotion expression at 0.68, 0.65, 0.59, and 0.68, respectively. The reliability of this questionnaire in the present study was estimated at 0.85 using Cronbach's alpha coefficient method.

Patient Health Questionnaire

This 15-item questionnaire, designed by Scott and Chloe (2003), measures physical symptoms and screens somatization disorder (19). This scale is part of the complete Patient Health Questionnaire and asks respondents about the incidence of 15 disturbing physical symptoms, 14 of which are the most common symptoms of somatization presented in the Diagnostic and Statistical Manual of Mental Disorders, 4th Edition (20). In this questionnaire, the scores obtained at less than 4, 5-9, 10-14, and 15-30 for somatization disorder are indicative of very low infection, low infection, moderate infection, and severe somatization disorder, respectively. The reliability and validity of this questionnaire have been reported to be very high in health centers. The concurrent validity of this instrument evaluated by the somatization scale of the Symptom Checklist-90 was estimated at 0.74, and its internal consistency was reported to be 0.76 using Cronbach's alpha coefficient method (21). The reliability of this questionnaire in the present study was obtained at 0.79 calculated by Cronbach's alpha coefficient method.

Eye movement desensitization and information reprocessing protocol: EMDR was performed in 8 stages in 8 sessions (22). Acceptance and commitment therapy was performed in 8 sessions (23).

The collected data were analyzed in SPSS software (version 22) using mean and standard deviation for descriptive statistics and repeated measure analysis of variance for the inferential analysis of results.

Results

The mean age scores of participants in the ACT, EMDR, and control groups were estimated at was 42.1±6.3, 41.5±3.7, and 42.8±4.7 years, respectively. The mean and standard deviation of research variables are presented in Table 1.

Table 1- Mean and standard deviation of physical symptoms and emotional expression in research groups

Variables	Group	Pre-test		Post-test		Follow-up	
		M	SD	M	SD	M	SD
Physical symptoms	ACT	12.25	1.71	4.92	1.88	5.08	1.37
	EMDR	12.42	2.61	6.75	3.84	6.17	3.46
	Control	12.75	1.86	11.82	2.13	11.49	2.05
Emotional expression	ACT	39.83	5.98	51.25	3.74	50.33	3.91
	EMDR	39.67	5.58	46.67	3.89	45.42	3.96
	Control	43.75	4.84	43.92	4.90	42.45	4.81

ACT: Acceptance and commitment therapy; EMDR: Eye movement desensitization and information reprocessing

Table 2- Multivariate analysis variance to investigate the difference between the mean of research variables

Variable	Factor	SS	Df	MS	F	P-value
Physical symptoms	Between-subjects	290.340	2	145.170	18.82	0.001
	Within-subjects	246.803	32	7.713		
	Total	537.143	34			
Emotionalexpression	Between-subjects	329.389	2	164.694	9.27	0.001
	Within-subjects	585.833	33	17.753		
	Total	915.22	35			

Table 2 shows that the differences between the research groups in all three variables of post-test emotional expression, and physical symptoms are statistically significant. These results indicate the effectiveness of experimental variables on dependent variables in this study.

Table 3- Follow-up test to investigate the differences between groups in research variables

Variable	Group	Groups	Mean Diff.	P-value
Physical symptoms	ACT	EMDR	-1.83	0.116
		Control	-6.90	0.001
	EMDR	ACT	1.83	0.116
		Control	-5.06	0.001
	Control	ACT	6.90	0.001
		EMDR	5.06	0.001
Emotional Expression	ACT	EMDR	4.58	0.012
		Control	7.33	0.001
	EMDR	ACT	-4.58	0.012
		Control	2.75	0.119
	Control	ACT	-7.33	0.001
		EMDR	-2.75	0.119

ACT: Acceptance and commitment therapy; EMDR: Eye movement desensitization and information reprocessing

According to Table 3, in the emotional expression variable, the mean difference of the post-test of the ACT group was statistically significant with that of the other two groups (P<0.001). However, the difference between EMDR experimental group and the control group was not significant. Regarding this, there was a significant difference between the effectiveness of these two experimental approaches.

Discussion

This study aimed to compare the effectiveness of EMDR and treatment based on the ACT on emotional expression, traumatic memory symptoms, and physical symptoms in female-headed households. The results showed that in the emotional expression variable, the mean difference between the ACT experimental group and the other two groups was statistically significant. Nevertheless, the difference between EMDR and the control group was not significant. Therefore, there was a significant difference between the effectiveness of these two experimental approaches. The results of this research were in line with those reported by Shapiro (22), which showed the efficacy of EMDR, and Hayes et.al (23), which indicated the effectiveness of ACT.

To explain this result, it can be said that in the treatment based on ACT, an important factor in creating and maintaining psychological damages is experiential avoidance, which means an exaggerated negative assessment of internal experiences (i.e., thoughts, emotions, and feeling) and unwillingness to experience them, which results in trying to control or avoid them. In this approach, it is tried to experience emotions as they are, which leads the person to understand the depth of his/her emotions, identify them correctly, and seek to understand them properly and correctly; when a person understands and manages his/her emotions with the help of employing ACT with healthy methods, he/she will achieve better emotional management (15).

It should be noted that the goal of ACT is to reduce experiential avoidance by accepting unpleasant and distressing emotions, such as anxiety, nurturing

mindfulness to thwart excessive conflict with cognitions, and identifying personal values related to behavioral goals. Moreover, the patient is encouraged to communicate with his experiences completely and without resistance while moving towards his/her valuable goals. This increases the motivation for change despite the unavoidable obstacles and encourages the person to strive for the realization of valuable goals of his life.

The reason for the success of treatment based on ACT beyond various types of clinical disorders and different groups of people is that this approach does not seek to change the content of thought, rather it is a behavioral therapy that uses mindfulness, acceptance, and cognitive faults to increase psychological flexibility. Acceptance and commitment therapy allows clients to change relationships with their internal experiences, reduce experiential avoidance, and increase flexibility (17). Hayes et al. (23) believe that accepting thoughts, feelings, and emotions as they are, neither more nor less, leads to weakening cognitive fusion; furthermore, accepting internal events, when the person is not in conflict with his distress and turmoil, allows him/her to develop his/her behavioral coffers that can be used to carry out valuable activities. Since ACT does not mean wanting disturbing emotions and experiences and tolerating them, the self-use of and commitment to a valuable and purposeful life (24) can lead to controlling thoughts, behaviors, and emotions self-willingly and consciously and managing emotions on one's own.

In explaining the rejection of this hypothesis, it can be said that the ineffectiveness of both therapeutic approaches on the variable of physical symptoms in this study could be due to various factors, such as the refractory of these people against psychological therapies. Considering that this disorder is common in medical environments and patients consider their problems physical and refer to the physician mainly for treatment and do not believe in psychological treatment, there are primary and secondary benefits. The existence of physical symptoms that are rewarding for the individual temporarily relieves anxiety, diverts the patient's attention from unconscious stresses, and develops the lack of responsibility in different areas. Therefore, they are highly sensitive to the symptoms of the disease, interpret vague stimuli as threats, and are afraid of them (12). In this respect, according to the mentioned cases, it can be said that close cooperation between physicians and psychologists, combined psychological and pharmacotherapy treatment, the use of long-term and multidimensional psychotherapy in the treatment of anxiety and mood disorders and other problems, and comorbidity with physical disorders of these people is necessary.

The limitation of this study was related to the sample of this study, which was female-headed households; in this regard, caution should be observed in generalizing the findings to other individuals and groups of society. In the present study, although the researcher's efforts were to control the conditions as much as possible, it was difficult to control all conditions in human subjects and psychological interventions. Due to the limitation of time, it was not possible to follow up the treatment in the long term to evaluate the effect of treatment over time. Since questionnaires were used to collect data, it was likely that the problems associated with this tool, including insufficient accuracy in answering the questions, might have occurred. It is suggested that the results of this study be used in clinics and medical centers by psychotherapists active in EDMR and ACT treatment concerning emotional expression and reduction of traumatic memory symptoms. It is also recommended that other methods be used to collect data in future pieces of research. Traumatic memories can be comorbid with emotional and traumatic disorders, such as depression, borderline personality disorder, and decomposition identity disorder; consequently, it is suggested that, in the future, researchers select the groups that have a common type of trauma.

Conclusion

It can be concluded that EMDR and ACT were effective in emotional expression and physical symptoms among female-headed households and these two treatments can be used to improve the problems of female-headed households.

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