



## Comparison of the effectiveness of two mindfulness and logotherapy methods on anxiety index in chronic daily headache of women with marital conflict: A clinical trial study

Samaneh Veisi<sup>1</sup>, Hossein Mohaghegh<sup>2</sup>, Abolghasem Yaghoobi<sup>2</sup>, Seyed Soheil Shams<sup>3</sup>, Bijan Pirnia<sup>4</sup>

1 Department of Psychology, Islamic Azad University, Hamadan Branch, Hamadan, Iran

2 Department of Psychology, Faculty of Economic and Social Sciences, Bu-Ali Sina University, Hamedan, Iran

3 Department of Psychology, Mahabad Branch, Payam-e-Noor University, Mahabad, Iran

4 Department of Psychology, Faculty of Humanities, University of Science and Culture, Tehran, Iran

### Original Article

#### Abstract

**BACKGROUND:** Anxiety is considered as the most common psychiatric disorder and the most common response to stress stimuli. Women with marital conflict experience a significant level of anxiety, which can have an adverse effect on other psychological and, in general, quality of life. This study was conducted to compare the effectiveness of two mindfulness and logotherapy methods on anxiety in women with chronic daily headache (CDH) with marital conflict.

**METHODS:** In a randomized clinical trial (RCT), during April 2015 to July 2015, 45 female patients with marital conflict were selected from among the referrers to the psychiatric centers of Hamadan City, Iran, using a purposive sampling method and were assigned into two treatment and control groups through block randomization method. Two mindfulness and logotherapy methods were presented in the form of 8 weekly sessions to the participants of the experimental group and the control group merely received the routine treatments of the center. Evaluation of two anxiety and marital conflict indices was performed at two points before and after treatment. The data were analyzed using analysis of covariance (ANCOVA) and Shefeh test in the software environment of SPSS.

**RESULTS:** The primary outcomes of the study showed that both mindfulness therapy and logotherapy were associated with a decrease in total anxiety scores ( $P < 0.0010$ ). Secondary outcomes also showed that logotherapy had a significant effect in reducing apparent anxiety ( $P < 0.0010$ ) and hidden anxiety ( $P < 0.0040$ ) compared to mindfulness therapy.

**CONCLUSION:** The results of this study, consistent with the research background, suggest that both mindfulness therapy and logotherapy are effective in reducing anxiety syndrome in women. However, the logotherapy was associated with more favorable therapeutic outcomes. These findings can have clinical applications in the context of family interventions.

**KEYWORDS:** Mindfulness; Logotherapy; Anxiety

**Date of submission:** 12 Sep. 2019, **Date of acceptance:** 19 Nov. 2019

**Citation:** Veisi S, Mohaghegh H, Yaghoobi A, Shams SS, Pirnia B. Comparison of the effectiveness of two mindfulness and logotherapy methods on anxiety index in chronic daily headache of women with marital conflict: A clinical trial study. *Chron Dis J* 2020; 8(2): 78-84.

### Introduction

Nowadays and along with human development, there has been a growing awareness of life stressors, so that it is necessary to pay attention to the response that

individuals are taking in the face of anxiety and to design appropriate interventions.<sup>1</sup>

Restlessness, sadness, grief, anorexia, increased blood pressure, increased respiratory distress, cardiac palpitations, and disorders in the daily activities are considered as signs and symptoms of these anxious elements. As a result of these factors, women are greatly affected and can seriously endanger

#### Corresponding Author:

Bijan Pirnia; Department of Psychology, Faculty of Humanities, University of Science and Culture, Tehran, Iran

Email: b.pirnia@usc.ac.ir

their health dimensions. On the one hand, social life is the basis of growth and, on the other hand, it can be a platform for creating psychological and interpersonal problems. One of the manifestations of human social life is the existence of a healthy and constructive interaction.<sup>2</sup>

Researchers have suggested that a common predisposition to anxiety disorders, depression, and migraine may exist. Migraine and chronic daily headaches (CDHs) are common in people who suffer from anxiety disorders.

One of the important problems of marital life is couples' marital conflict, in which personality traits and psychiatric disorders are among the most important causes of conflicts in couples. Interpersonal problems in couples cause feelings of anger, frustration, or dissatisfaction that is called marital conflict. In today's societies, due to the complexity of dimensions of life, marital conflicts, divorce, and re-marriage are grown significantly. Some personality traits and psychiatric disorders increase tensions and conflicts among couples and threaten the continuity of marital life.<sup>3</sup> One of the most perceptible syndromes in marital conflict is anxiety. In this regard, studies have shown that anxiety in men is lower than that of women and women are twice as likely to experience this disorder. About 3% of the general population experience anxiety. Paying attention to the mental health of women and their impact on maintaining the family center and having a healthy society is one of the goals of the World Health Organization (WHO).<sup>4</sup>

In all years of psychological treatment, various methods have been used to treat and reduce anxiety. However, in the last decade, a generation of cognitive therapies has been formed, the so-called third-wave therapy treatments. In the third wave of psychotherapy, it is believed that knowledge and emotions should be considered in the conceptual context of phenomena. For this reason, instead of approaches, such as

cognitive behavioral therapy (CBT), which correct inadequate cognitive beliefs and knowledge to correct emotions and behaviors, here, the patient is trained to take his emotions in the first step and in living here and now take more psychological flexibility.<sup>5,6</sup>

In this regard, mindfulness therapy has formed the core of many of the third-wave therapies. This therapeutic approach is one of the techniques that go into mind-body therapy. This method refers to an acceptable, instantaneous, and non-judgmental knowledge, and its underlying assumption refers to the fact that increased awareness leads to increased perceived self-awareness and, as a result, increased coping potency. In mindfulness, the mental representation of objects in life is taught through breathing and thinking.<sup>7</sup> Anxiety-based mindfulness is a structured group program that aims to reduce anxiety in order to promote mental health and reduce marital conflicts. The results of the studies show that meditation improves mood awareness and its short-term education reduces fatigue and anxiety. Also, the education of mindfulness is effective on psychological indices of depression, anxiety, and psychological compatibility.<sup>1,8</sup>

On the other hand, logotherapy is a paradigm that is a result of an existential approach that provides a philosophical and theoretical basis for group work. Logotherapy can provide a conceptual structure to help individuals find challenges in their lives. Logotherapy emphasizes on four notions of interest that are rooted in human existence, that is, death, freedom, loneliness, and meaninglessness. One of the factors reducing self-esteem and creating anxiety problems is the lack of meaning in life.

Despite the research background on the effectiveness of mindfulness therapy and logotherapy, the effectiveness of these two approaches on the anxiety index in women has not been studied yet. Considering the importance of anxiety in causing systemic

damages to the family system and considering the lack of research in scientific literature, this study was conducted to compare the effectiveness of mindfulness therapy and logotherapy on anxiety index in women with CDH with marital conflict.

### Materials and Methods

In a randomized clinical trial (RCT) with pre-test and post-test, during April 2015 to July 2015, 45 women with CDH with marital conflict who referred to counseling centers of Hamadan City, Iran, were selected through purposive sampling method and were equally assigned into two treatment and control groups (15 patients in each group) through block randomization method.

The inclusion criteria were: 1) age range of 18-40 years, 2) minimum education level of diploma, and 3) CDHs occurring 15 days or more a month for longer than three months. Exclusion criteria were: 1) diagnosis of acute psychiatric disorders, 2) more than two absentee sessions in the treatment process, and 3) lack of informed consent.

Two methods of mindfulness therapy and logotherapy were presented to the participants of the experimental group in the form of 8 weekly sessions (twice a week and each session for 90 minutes) and the control group merely received the routine treatments of the center. Two indices of anxiety and marital conflict were evaluated at two intervals of before and after treatment.

Data were collected using demographic checklist, semi-structured clinical interview, the State-Trait Anxiety Inventory (STAI), and Marital Conflict Questionnaire (MCQ).

**Demographic checklist:** This questionnaire was prepared and used by the researcher to collect demographic information.

**Structured Clinical Interview for Diagnostic and Statistical Manual of Mental Disorders (DSM) (SCID):** It is a clinical interview which is used for diagnosis of Axis I Disorders based on

DSM, fourth edition (DSM-IV). Inter-rater reliability coefficient for SCID has been reported equal to 0.6.<sup>9</sup> The diagnostic agreement of this tool in Persian was favorable for most general and specific diagnoses with reliability greater than 0.60. The Kappa coefficient for all of the current diagnoses and longevity diagnosis was obtained equal to 0.52 and 0.55, respectively.<sup>10</sup>

**STAI:** This tool consists of 19 items that are designed in the form of a 4-point Likert scale. Spilberger's apparent and hidden anxiety questionnaire includes separate scales of self-esteem in order to evaluate apparent and hidden anxiety. The apparent anxiety scale of y-1 form consists of 20 items that assess the individual's emotions at this moment and at the time of response. The hidden anxiety scale of y-2 form consists of 20 items that measure the general and ordinary feelings of individuals. The scores of each of the two apparent and hidden anxiety scales can range from 20 to 80. The test reliability and the criterion validity of the mentioned test were reported as desirable in two apparent and hidden anxiety indices.

**Revised MCQ (MCQ-R):** The MCQ is a 54-item questionnaire designed to evaluate couples' marital conflicts based on clinical experiences. This tool is designed in the form of 5-point Likert scale. The maximum score is 270 and at least is 54. In this tool, a higher score means more conflict and fewer score means better relationships and less conflict. The reliability and validity of this tool have been reported well.

Data were analyzed by analysis of covariance (ANCOVA) test in SPSS software (version 22, IBM Corporation, Armonk, NY, USA) and the significance level was considered as 0.05.

To analyze the data, ANCOVA test was used and the effect of pre-test was deleted. Before applying the parametric test of ANCOVA, its assumptions were examined. The assumption of normal distribution of the

data was verified by Kolmogorov-Smirnov test (K-S test) ( $P > 0.0500$ ). Moreover, the results of Levene's test showed the equalization of variances ( $P > 0.0500$ ). The assumption of the linearity of the variables was also established.

All stages of the study were performed after obtaining written consent from patients and based on the latest version of the Declaration of Helsinki. In order to observe ethical principles, after the end of the treatment process, the control group received 6 sessions of mindfulness therapy and logotherapy.

## Results

In table 1, the distribution of participants' scores in the research is presented in two pre- and post-test stages.

**Table 1. The scores of apparent, hidden, and general anxiety of women in two pre-test and post-test stages (N each group = 15)**

Stages	Variables	Groups	Mean $\pm$ SD
Pre-test	Apparent anxiety	Control	53.87 $\pm$ 7.44
		Logotherapy	57.73 $\pm$ 6.45
		Mindfulness	58.93 $\pm$ 7.87
	Hidden anxiety	Control	55.40 $\pm$ 10.19
		Logotherapy	59.33 $\pm$ 8.76
		Mindfulness	61.00 $\pm$ 8.15
	General anxiety	Control	109.27 $\pm$ 16.70
		Logotherapy	117.07 $\pm$ 14.28
		Mindfulness	119.93 $\pm$ 15.56
Post-test	Apparent anxiety	Control	55.13 $\pm$ 7.96
		Logotherapy	34.27 $\pm$ 7.19
		Mindfulness	47.27 $\pm$ 7.57
	Hidden anxiety	Control	55.40 $\pm$ 10.71
		Logotherapy	38.27 $\pm$ 9.02
		Mindfulness	50.40 $\pm$ 7.97
	General anxiety	Control	110.53 $\pm$ 16.94
		Logotherapy	72.53 $\pm$ 14.44
		Mindfulness	97.67 $\pm$ 14.86

SD: Standard deviation

The ANCOVA was used to compare the effectiveness of the two therapies. The results of the test are presented in table 2.

As can be seen in the results of table 2, the significance level shows that there is a significant difference between the three groups.

In order to evaluate the difference in the effectiveness of the therapies, Shefeh post-hoc test was used. The results are presented in table 3. According to the results of table 3, F statistics in comparing the effectiveness of meaningfulness therapy and logotherapy on the general anxiety of women with marital conflicts ( $i-j = 25.13$ ,  $P = 0.0001$ ) indicated that there was a significant difference between the effect of logotherapy and mindfulness therapy on the general anxiety of women with marital conflicts.

Therefore, the effect of logotherapy method on reducing the general anxiety of women with marital conflicts was more than that of mindfulness therapy.

In order to investigate the inter-group effects, the ANCOVA test was used. The results are presented in table 4.

## Discussion

This study was conducted to compare the effectiveness of mindfulness therapy and logotherapy on anxiety in women with CDH with marital conflict.

The primary outcomes showed that both mindfulness therapy and logotherapy were associated with decreasing in total anxiety scores. Secondary outcomes also showed that logotherapy had a more significant effect in decreasing the apparent and hidden anxiety scores than mindfulness therapy.

**Table 2. Results of the analysis of covariance (ANCOVA) test in comparing three groups of the research**

Test name	Magnitude	F	Assumption DF	Error DF	P
Pillai's trace	0.59	8.79	4	84	0.0001
Wilk's lambda	0.42	11.29	4	82	0.0001
Hotelling's trace	1.39	13.89	4	80	0.0001
Roy's largest root	1.38	28.97	2	42	0.0001

DF: Degree of freedom

**Table 3. Shefe test in comparing the effectiveness of two therapies of mindfulness therapy and logotherapy on total anxiety**

Group i		Group j		
		Control	Logotherapy	Mindfulness
Control	i-j difference	-	38.00	12.87
	P	-	0.0001	0.0860
Logotherapy	i-j difference	38.00	-	-25.13
	P	0.0001	-	0.0001
Mindfulness	i-j difference	-12.87	25.13	-
	P	0.0860	0.0001	-

In a review of existing literature, a similar study was not found in comparing the effectiveness of two methods of mindfulness therapy and logotherapy on reducing anxiety in women with marital conflict and the effectiveness of these interventions has often been studied separately. Therefore, considering the exploratory nature of the present study, we reviewed the literature on the effectiveness of each of the two treatments studied. The primary outcomes of the present study reflect the effectiveness of logotherapy on the reduction of anxiety syndrome. In this regard and in line with our results, the results of the study by Robotmili et al. showed that the use of logotherapy was associated with the reduction of depression syndromes.<sup>11</sup> In the study by Rasoli and Borjali about the effectiveness of group logotherapy on the reduction of anxiety in patients with multiple sclerosis (MS), the results showed that the

logotherapy decreased anxiety and increased self-confidence in patients.<sup>12</sup> In addition, the results of the study by Cheavens et al. showed that logotherapy was associated with reduction of anxiety syndrome.<sup>13</sup>

A part of the results of this study showed that mindfulness intervention was associated with reduction of anxiety syndrome. In this regard, in line with the results of the present study, the results of the study by Pirnia and Pirnia showed that the mindfulness therapy could reduce the negative mood syndrome in women with cancer.<sup>1</sup> In this regard, the results of the study by Akbari Daghi showed the effectiveness of the stress-reducing mindfulness in reducing anxiety, stress, and depression in cardiac patients.<sup>14</sup> In this regard, the results of the study by Walsh et al. showed that training of mindfulness played a significant role in anxiety and anxiety dependency.<sup>15</sup>

**Table 4. Results of the analysis of covariance (ANCOVA) in the study of intergroup effects**

Source of changes	Dependent variable	Sum of squares	DF	Mean of squares	F	P
Group's effect	Apparent anxiety	3331.51	2	1665.76	28.96	0.0001
	Hidden anxiety	2328.84	2	1164.42	13.45	0.0001
	General anxiety	11206.18	2	5603.08	23.48	0.0001
Error	Apparent anxiety	2415.60	42	57.51	-	-
	Hidden anxiety	3636.13	42	86.28	-	-
	General anxiety	10024.80	42	238.68	-	-
Total	Apparent anxiety	99136.00	45	-	-	-
	Hidden anxiety	109741.00	45	-	-	-
	General anxiety	415287.00	45	-	-	-
Modified total	Apparent anxiety	5747.11	44	-	-	-
	Hidden anxiety	5964.97	44	-	-	-
	General anxiety	21230.98	44	-	-	-

DF: Degree of freedom

In explaining the effectiveness of mindfulness intervention, it can be acknowledged that if the root of anxiety problems in patients is considered as a process of rumination, the teaching of mindfulness through purposeful life, understanding now, and the belief that "I can" without judgment or bias can reduce the level of mood syndrome.<sup>16</sup> The study of the effect of logotherapy and mindfulness therapy on reducing the anxiety of women with marital conflict can be the starting point for designing psychological interventions in order to adapt, reduce syndrome, and empower women.

This study had some limitations in the implementation process. Due to the sample constraint, the generalization of the results to other groups is not possible; also the lack of follow-up of therapeutic changes due to time constraints can be cited as the limitation of this study. It is suggested that future studies along with the paper and pen tools should use biological evaluations to evaluate the efficacy of the therapy. Also, a clinical trial in men with marital conflict can be a good route for future studies.

### Conclusion

In The results of this study suggest that both mindfulness therapy and logotherapy are effective in reducing anxiety syndrome in women. However, the logotherapy was associated with more favorable therapeutic outcomes.

### Conflict of Interests

Authors have no conflict of interests.

### Acknowledgments

The authors are grateful to all the people who participated in this study and helped facilitate the research process. This study has been derived from a MSc dissertation No, 931072931 approved by University of Science and Culture.

### References

1. Pirnia B, Pirnia K. Comparison of two mindfulness-based cognitive therapies and acupuncture on the pain and depression index in a case with lobular carcinoma: A single case experimental study. *Int J Cancer Manag* 2018; 11(6): e65641.
2. Redzuan M. Perception of Women towards family values and their marital satisfaction. *J Am Sci* 2010; 6(4): 132-7.
3. Whisman MA, Uebelacker LA, Weinstock LM. Psychopathology and marital satisfaction: the importance of evaluating both partners. *J Consult Clin Psychol* 2004; 72(5): 830-8.
4. Eslami M. Determination of the effect of mata yoga training on the reduction of women's anxiety 20-49 [MSc Thesis]. Tehran, Iran: Tarbiat Modares University; 2013. [In Persian].
5. Vilardaga R, Heffner JL, Mercer LD, Bricker JB. Do counselor techniques predict quitting during smoking cessation treatment? A component analysis of telephone-delivered Acceptance and Commitment Therapy. *Behav Res Ther* 2014; 61: 89-95.
6. Kaviani H, Javaheri F, Hatami N. Mindfulness-based Cognitive Therapy (MBCT) Reduces Depression and Anxiety Induced by Real Stressful Setting in Non-clinical Population. *Intern Jour Psych Psychol Therapy* 2011; 11(2): 285-96.
7. Kabat-Zinn J, Massion AO, Kristeller J, Peterson LG, Fletcher KE, Pbert L, et al. Effectiveness of a meditation-based stress reduction program in the treatment of anxiety disorders. *Am J Psychiatry* 1992; 149(7): 936-43.
8. Piet J, Hougaard E. The effect of mindfulness-based cognitive therapy for prevention of relapse in recurrent major depressive disorder: A systematic review and meta-analysis. *Clin Psychol Rev* 2011; 31(6): 1032-40.
9. First MB, Spitzer RL, Gibbon M, Williams JB. Structured clinical interview for axis 1 DSM-IV disorders. New York, NY: Biometric Research Department, New York State Psychiatric Institute; 1994.
10. Pirnia B, Pirnia K, Mohammadpour S, Malekanmehr P, Soleimani A, Mahmoodi Z, et al. The effectiveness of acupuncture on HPA functional in depressed patients under methadone maintenance treatment, a randomized double-blind sham-controlled trial. *Asian J Psychiatr* 2018; 36: 62-3.
11. Robotmili S, Mehrabizade Honarmand M, Zargar Y, Karimi Khoygani R. The effect of group logotherapy on depression and hope in university students. *Knowledge & Research in Applied Psychology* 2013; 14(3): 3-10. [In Persian].

12. Rasoli L, Borjali A. The efficiency of group logo therapy in decreasing anxiety and increasing self-esteem in patients with multiple sclerosis. *Clinical Psychology Studies* 2011; 1(3): 43-59. [In Persian].
13. Cheavens JS, Feldman DB, Gum A, Michael ST, Snyder CR. Hope therapy in a community sample: A pilot investigation. *Soc Indic Res* 2006; 77(1): 61-78.
14. Akbari Daghi H. The effectiveness of stress-reduction mindfulness therapy method in reducing stress, anxiety, depression and ineffective attitudes in cardiac patients [MSc Thesis]. Tehran, Iran: Tehran Branch, Islamic Azad University; 2012. [In Persian].
15. Walsh JJ, Balint MG, Smolira SJ DR, Fredericksen LK, Madsen S. Predicting individual differences in mindfulness: The role of trait anxiety, attachment anxiety and attentional control. *Pers Individ Dif* 2009; 46(2): 94-9.
16. Rostami A, Shariatnia K, Khajehvand Khoshli A. The relationship between self-efficacy and mindfulness with rumination among students of Islamic Azad University, Shahrood Branch. *Medical Sciences*. 2015; 24(4): 254-9. [In Persian].