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# The effectiveness of mindfulness training on psychological health in patients with temporal lobe epilepsy

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**ABSTRACT:** This study aimed to assess the efficacy of mindfulness training on mental health of women with temporal lobe epilepsy in Tehran. Among women, 4 0 available sample method, were selected randomly in the experimental and control groups were tested. 8 sessions of mindfulness intervention in the experimental group were used and the results showed that mindfulness intervention compared to the control group in the pre-test - post-test and pre-test - follow-up on the mental health of women with epilepsy and score of somatization, interpersonal sensitivity, anxiety, aggression, and psychosis has been a significant decrease in post-test (p < 0.01).

Keywords: Psychological, Health, Temporal.

#### INTRODUCTION

Electrical discharge known epilepsy brain and that is a common medical disorder (Victor, 2001). Temporary seizures of physiological brain function due to abnormal electrical discharge Hyper synchronize on their own fading cortical neurons are (Anneyers, 2001). Epilepsy is characterized sometimes by pretending family background and other tests and the patient's clinical trials except Electroencephalography The pattern of seizures shows that the pathological findings (Middeldorp, 2002), about 50 million people worldwide have epilepsy and diseases 1% of the total cost Of the novel account The (Rosemberg, 2005). In 30% of patients experience chronic attacks that are completely satisfactory and do not respond to anti-epileptic drugs Answer (Lee, 2007). More than a quarter of people with epilepsy experience psychological problems That may need to be treated and more than 10% of hospitalized patients are affected by this disease medical Revamp (Chang & et al, 2003). Evidence suggests that humans are born with a set of emotional responses and although these emotional responses in all cultures and societies, and in response to internal and external stimuli occur But people have different strategies in response to stimulus Learn. Therefore, no two people have the same emotional response to a stimulus, not shown, (Cordova, Waren, Gee, 2005).

Emotion plays a critical role in mental disorders A. Emotional inconsistency in all the disorders I (with the exception of mental retardation) and half of the disorder Axis II (perturbations that occurs in childhood, personality disorders and mental retardation) of the (Aldao, 2010). Epilepsy of disturbances that can be associated with emotion. Epilepsy, in 2005, by Association Epilepsy as a brain disorder that international deal with the ongoing preparations for the development of epileptic seizures and neurological outcomes, cognitive, psychological and social effects of this condition is unknown, was described. This new interpretation of the disease the importance of neuropsychological and behavioral aspects of epilepsy focuses (Henry, Reynold, 2009).

Studies have estimated that 1.5 to 5 percent of the population at a specific time, with seizures is (Walter, 2008). The prevalence and incidence of epilepsy in developing countries is (Walter, 2005). Limited access to health care and injury Birth and head of risk factors considered epilepsy be. In addition, increasing the lead to brain infection rate of epilepsy is (Brodie & Kwan, 2005). People with epilepsy may be social isolation and problems in education, employment and family life have (Bishop & Allen, 2003). In many people with epilepsy, the social nature of the disease is a problem. It is exposed to a range of psychiatric disorders including anxiety and personality disorders are

(Pauli & Stefani, 2009). Office epilepsy, attention to mental health problems - social and educational program that is causing this issue requires more knowledge (Tlusta & Zarubova, 2009). Low self-esteem, depression, anxiety, social isolation, and multiple constraints, including problems that people with epilepsy are involved.

Mindfulness training therapy, including treatment that can have a positive impact on psychological variables in patients with epilepsy. Mindfulness, Feeling without judgment and balance of consciousness, which clearly describe and accepting your emotions and physical phenomena occur that the help (Issa, Baiyewu, 2006). Learning mindfulness stress reduction is a treatment where the mental representation of things in life that operate is out of control immediately. Through breathing to thinking to be taught (Lechner & etal, 2003). The training in reducing psychological distress (Penedo & etal, 2004) and symptoms of anxiety and depression (Penedo & etal, 2007) has been used and improved Behzist mental, physical, emotional and spiritual, (Linden, 2005) as well as improved sleep quality (Beck, 2002) and physical symptoms (Vickrey, 1993) is. The research showed that mindfulness predictor of self-regulation behavior and positive emotional states, and by combining the vibrancy and vivid viewing experience can create positive changes in happiness and well-being (Issa, 2006). Mindfulness leads to better quality of life, enjoy life, reduce depression, and rage (Vickrey, 1993). In addition, plays an important role in reducing short-term and long-term symptoms is depressed mood (Salehzadeh, 2008).

The aim of this study the efficacy of mindfulness training on women's mental health Temporal lobe epilepsy is. The study of clinical psychology enforcement can be increased. In addition to strengthening the study of psychology, can play a role in improving mental health patients to therapists is related variables.

#### MATERIALS AND METHODS

This case-control study and Spread of multi-group (pre-test, post-test and follow-up with the control group, respectively). In this study educational methods - health in the mindfulness training and no training (control group) were considered. The study population included all patients with epilepsy hospital in Tehran in 2015 Millad formed (with a diagnosis of a neurologist and EEG). After determination of epilepsy patients, were studied mental disorder but received high scores on the questionnaire. 40 patients randomly assigned to two groups were the case. The criteria for entry into the study were the female gender, higher education, based on the diagnosis of neurologist epilepsy, EEG pattern at least 6 months have passed since their seizure diagnosis and treatment, and the disease is under control. Exclusion criteria for this study are patients with mental retardation and mental disorders.

#### Intervention

Teaching Mindfulness: Mindfulness-based stress reduction training for the first group in 8 sessions, each sessions lasting an hour and a half were taught:

First session: pre-test, communication and concept of the need to learn how to use mindfulness training and relaxation. For the second session: Relaxation Training. Group of muscles, including the forearm, upper arm, calf muscle, leg, thighs, abdomen, chest, shoulder, Neck, lips, eyes, jaws, Forehead (the bottom) and forehead (above). Third session: Relaxation Training: for 6 groups of muscles in the hands, arms, legs, thighs, abdomen, chest, neck and shoulder And jaws And forehead, lips and eyes and homework relaxation.

Session Four: Teaching mindfulness of breathing: short review of the previous session, learn how mindfulness of breathing, breathing techniques and relaxation techniques without thinking about other things and watch the breathing and mindfulness of breathing homework before bedtime for 20 minutes.

Fifth Session: body monitoring techniques: techniques based on body movement during breathing, focus and movement of the body and the search for a sense of physical and homework mindfulness eating (eating calmly and according to the taste and appearance of food).

Sixth Session: minds mindfulness training: training pay attention to mind, positive and negative thoughts, pleasant or unpleasant thoughts, allowing the entry of negative and positive thoughts in mind and easily out of mind without judgment and deep attention to them and Writing homework a positive experience No negative judgments about them.

Seventh Session: Mindfulness: The repeated training sessions 4, 5, 6 each for 20 to 30 minutes. Eighth Session: Summary of training sessions and run the test.

## Tool

Symptoms Questionnaire SCL - 90- R: The test consists of 90 questions and a self-evaluation tool of psychological symptoms in 9 somatization, obsession, compulsion, interpersonal sensitivity, depression, anxiety, hostility, phobic anxiety, thoughts the psychiatric assessment. The test's reliability and validity of the questionnaire Standardization, outside, and inside of the case has been confirmed (Beh Kish, 1994).

# **RESULTS AND DISCUSSION**

## Result

Further studies showed that the experimental and control groups in terms of somatization, interpersonal sensitivity, anxiety, aggression, and psychosis at the level p <0.01 significant difference. The mindfulness training has mental health in epilepsy patients in the post-test in terms of somatization, interpersonal sensitivity, anxiety, aggression, and psychosis increase.

Table 1. Comparing control and experimental groups in mean total score of mental health In its scale in the pre-test, post-test

| Variable            |         | pre-exa | am    | After th | e test | Follow | Follow up |  |
|---------------------|---------|---------|-------|----------|--------|--------|-----------|--|
|                     |         | Mean    | Sd    | Mean     | Sd     | Mean   | Sd        |  |
| Somatization        | Test    | 9.26    | 2.75  | 5.66     | 6.98   | 6.67   | 8.03      |  |
|                     | Control | 7.93    | 1.04  | 9.8      | 6.34   | 9.55   | 5.61      |  |
| Obsession           | Test    | 10.13   | 2.12  | 6.12     | 5.98   | 8.78   | 7.43      |  |
|                     | Control | 8.66    | 1.57  | 8.33     | 5.81   | 6.67   | 3.54      |  |
| Support interaction | Test    | 8.60    | 1.83  | 4.43     | 4.74   | 6.86   | 3.24      |  |
|                     | Control | 7.80    | 1.42  | 8.78     | 7.07   | 6      | 7.35      |  |
| Depression          | Test    | 13.26   | 2.77  | 9.70     | 7.96   | 10.7   | 5.25      |  |
|                     | Control | 10      | 1.3   | 12.22    | 8.19   | 12.87  | 10.56     |  |
| Anxiety             | Test    | 8.53    | 1.22  | 4.97     | 4.84   | 5.67   | 8.25      |  |
|                     | control | 6.33    | 1.19  | 6        | 4.81   | 7.20   | 4.17      |  |
| Aggression          | Test    | 3.40    | 0.30  | 2.26     | 1.08   | 2.54   | 5.29      |  |
|                     | control | 5       | 0.45  | 5.20     | 2.98   | 3.53   | 2.09      |  |
| Phobia              | Test    | 2.8     | 0.87  | 2.33     | 2.89   | 2.80   | 2.47      |  |
|                     | control | 0.533   | 0.19  | 2        | 2.30   | 1.80   | 4.09      |  |
| Paranoid            | Test    | 8.13    | 1.42  | 5        | 4.32   | 5.6    | 2.34      |  |
|                     | control | 6.06    | 1.09  | 6.40     | 4.45   | 4.53   | 3.45      |  |
| Psychosis           | Test    | 6.46    | 1.83  | 3.87     | 5.38   | 4.97   | 6.76      |  |
| •                   | control | 4.93    | 1.1   | 5.73     | 4.77   | 5.33   | 7.89      |  |
| Total               | Test    | 78.13   | 15.03 | 48.06    | 43.13  | 58.56  | 53.12     |  |
|                     | control | 64.33   | 7.90  | 70.6     | 41.54  | 64     | 38.32     |  |

|                            | sst                 | Df | Root Mean           | F                 | Р     | Eta            | Power of test  |
|----------------------------|---------------------|----|---------------------|-------------------|-------|----------------|----------------|
| pre-exam<br>Join the group | 37943.78<br>7808.90 | 1  | 37943.78<br>3802.45 | 107.914<br>10.812 | 0.001 | 0.800<br>0.445 | 1.000<br>0.982 |
| Join the group             | 1000.90             | 2  | 3002.43             | 10.012            | 0.001 | 0.445          | 0.302          |

As the results show that mindfulness, training has been able to increase the amount of mental health patients in the post-test and there is a significant difference between the groups P<0.01.

| Table 3. The health of the stages of analysis of covariance |                                      |   |       |      |       |       |       |  |
|---|--------------------------------------|---|-------|------|-------|-------|-------|--|
|   | Sst Df Root mean F P Eta Power of te |   |       |      |       |       |       |  |
| pre-exam  | 47678                                | 1 | 47678 | 103  | 0.001 | 0.794 | 1.000 |  |
| Join the group  | 1988                                 | 1 | 1988  | 4.31 | 0.04  | 0.138 | 0.517 |  |

As the results show an increase in the mindfulness, training in mental health patients in follow-up is continuing and there is a significant difference between the groups P<0.01.

| Table 4. Mental | health scale | score | s at post-tes | t ana | lysis of cova | riance |               |
|-----------------|--------------|-------|---------------|-------|---------------|--------|---------------|
| Variable        | Sst          | Df    | Root mean     | F     | Р             | Eta    | Power of test |

| Somatization605.501605.5013.6460.0010.3530.959Obsession656.141656.1432.4020.0010.5671.000Support interaction568.721568.7253.1310.0010.6631.000Depression1243.5311243.5368.1230.0010.7161.000Anxiety387.421387.4239.4350.0010.5411.000Aggression41.09141.0918.7650.0010.5411.000Pre-examPhobia109.031109.0332.4450.0010.5411.000Paranoid383.651383.6568.2450.0010.7221.000Psychosis476.881476.8857.8710.0010.6511.000Somatization252.102252.103.6700.0390.2140.623Obsession96.46296.462.8760.0690.1800.527Support interaction19821987.4370.010.3860.946Depression109.212109.213.0870.0440.1840.541Anxiety76.89276.8920.9780.0310.2270.661Aggression111.892111.892.5240.0010.6081.000Join the groupPhobia17.68217.682.7680.0990.1580.462Parano |                |                     |         |   |         |        |       |       |       |
|--|----------------|---------------------|---------|---|---------|--------|-------|-------|-------|
| Support interaction568.721568.7253.1310.0010.6631.000Depression1243.5311243.5368.1230.0010.7161.000Anxiety387.421387.4239.4350.0010.5001.000Aggression41.09141.0918.7650.0010.3970.982pre-examPhobia109.031109.0332.4450.0010.5111.000Paranoid383.651383.6568.2450.0010.7221.000Psychosis476.881476.8857.8710.0010.6511.000Somatization252.102252.103.6700.0390.2140.623Obsession96.46296.462.8760.0010.3860.946Depression109.212109.213.0870.0640.1840.541Anxiety76.89276.8920.9780.0310.2270.661Aggression111.892111.892.5240.0010.6081.000Join the groupPhobia17.68217.682.7680.0990.1580.462Paranoid28.77228.7715.330.0830.1690.496  |                | Somatization        | 605.50  | 1 | 605.50  | 13.646 | 0.001 | 0.353 | 0.959 |
| Depression1243.5311243.5368.1230.0010.7161.000Anxiety387.421387.4239.4350.0010.5001.000Aggression41.09141.0918.7650.0010.3970.982pre-examPhobia109.031109.0332.4450.0010.7121.000Paranoid383.651383.6568.2450.0010.7221.000Psychosis476.881476.8857.8710.0010.6511.000Somatization252.102252.103.6700.0390.2140.623Obsession96.46296.462.8760.0690.1800.527Support interaction19821987.4370.0010.3860.946Depression109.212109.213.0870.0640.1840.541Anxiety76.89276.8920.9780.0310.2270.661Aggression111.892111.892.5240.0010.6081.000Join the groupPhobia17.68217.682.7680.0990.1580.462Paranoid28.77228.772.87715.330.0830.1690.496  |                | Obsession           | 656.14  | 1 | 656.14  | 32.402 | 0.001 | 0.567 | 1.000 |
| Anxiety387.421387.4239.4350.0010.5001.000Aggression41.09141.0918.7650.0010.3970.982pre-examPhobia109.031109.0332.4450.0010.5411.000Paranoid383.651383.6568.2450.0010.7221.000Psychosis476.881476.8857.8710.0010.6511.000Somatization252.102252.103.6700.0390.2140.623Obsession96.46296.462.8760.0010.3860.946Depression109.212109.213.0870.0640.1840.541Anxiety76.89276.8920.9780.0310.2270.661Aggression111.892111.892.5240.0010.6081.000Join the groupPhobia17.68217.682.7680.0990.1580.462Paranoid28.77228.7715.330.0830.1690.496   |                | Support interaction | 568.72  | 1 | 568.72  | 53.131 | 0.001 | 0.663 | 1.000 |
| Aggression41.09141.0918.7650.0010.3970.982pre-examPhobia109.031109.0332.4450.0010.5411.000Paranoid383.651383.6568.2450.0010.7221.000Psychosis476.881476.8857.8710.0010.6511.000Somatization252.102252.103.6700.0390.2140.623Obsession96.46296.462.8760.0010.3860.946Depression109.212109.213.0870.0640.1840.541Anxiety76.89276.8920.9780.0310.2270.661Aggression111.892111.892.5240.0010.6081.000Join the groupPhobia17.68217.682.7680.0990.1580.462Phobia28.77228.7715.330.0830.1690.496  |                | Depression          | 1243.53 | 1 | 1243.53 | 68.123 | 0.001 | 0.716 | 1.000 |
| pre-exam Phobia<br>Paranoid 109.03<br>383.65 1<br>383.65 109.03<br>383.65 32.445 0.001 0.541 1.000   Psychosis 476.88 1 383.65 68.245 0.001 0.722 1.000   Psychosis 476.88 1 476.88 57.871 0.001 0.651 1.000   Somatization 252.10 2 252.10 3.670 0.039 0.214 0.623   Obsession 96.46 2 96.46 2.876 0.069 0.180 0.527   Support interaction 198 2 198 7.437 0.001 0.386 0.946   Depression 109.21 2 109.21 3.087 0.064 0.184 0.541   Anxiety 76.89 2 76.89 20.978 0.031 0.227 0.661   Aggression 111.89 2 111.89 2.524 0.001 0.608 1.000   Join the group Phobia 17.68 2 17.68 <   |                | Anxiety             | 387.42  | 1 | 387.42  | 39.435 | 0.001 | 0.500 | 1.000 |
| Paranoid383.651383.6568.2450.0010.7221.000Psychosis476.881476.8857.8710.0010.6511.000Somatization252.102252.103.6700.0390.2140.623Obsession96.46296.462.8760.0090.1800.527Support interaction19821987.4370.0010.3860.946Depression109.212109.213.0870.0640.1840.541Anxiety76.89276.8920.9780.0310.2270.661Aggression111.892111.892.5240.0010.6081.000Join the groupPhobia17.68217.682.7680.0990.1580.462Paranoid28.77228.772.87715.330.0830.1690.496   |                | Aggression          | 41.09   | 1 | 41.09   | 18.765 | 0.001 | 0.397 | 0.982 |
| Somatization252.102252.103.6700.0390.2140.623Obsession96.46296.462.8760.0690.1800.527Support interaction19821987.4370.0010.3860.946Depression109.212109.213.0870.0640.1840.541Anxiety76.89276.8920.9780.0310.2270.661Aggression111.892111.892.5240.0010.6081.000Join the groupPhobia17.68217.682.7680.0990.1580.462Paranoid28.77228.7715.330.0830.1690.496   | pre-exam       |                     |         | - |         |        |       |       |       |
| Obsession96.46296.462.8760.0690.1800.527Support interaction19821987.4370.0010.3860.946Depression109.212109.213.0870.0640.1840.541Anxiety76.89276.8920.9780.0310.2270.661Aggression111.892111.892.5240.0010.6081.000Join the groupPhobia17.68217.682.7680.0990.1580.462Paranoid28.77228.7715.330.0830.1690.496  |                | Psychosis           | 476.88  | 1 | 476.88  | 57.871 | 0.001 | 0.651 | 1.000 |
| Support interaction19821987.4370.0010.3860.946Depression109.212109.213.0870.0640.1840.541Anxiety76.89276.8920.9780.0310.2270.661Aggression111.892111.892.5240.0010.6081.000Join the groupPhobia17.68217.682.7680.0990.1580.462Paranoid28.77228.7715.330.0830.1690.496  |                | Somatization        | 252.10  | 2 | 252.10  | 3.670  | 0.039 | 0.214 | 0.623 |
| Depression109.212109.213.0870.0640.1840.541Anxiety76.89276.8920.9780.0310.2270.661Aggression111.892111.892.5240.0010.6081.000Join the groupPhobia17.68217.682.7680.0990.1580.462Paranoid28.77228.7715.330.0830.1690.496  |                | Obsession           | 96.46   | 2 | 96.46   | 2.876  | 0.069 | 0.180 | 0.527 |
| Anxiety76.89276.8920.9780.0310.2270.661Aggression111.892111.892.5240.0010.6081.000Join the groupPhobia17.68217.682.7680.0990.1580.462Paranoid28.77228.7715.330.0830.1690.496   |                | Support interaction | 198     | 2 | 198     | 7.437  | 0.001 | 0.386 | 0.946 |
| Aggression 111.89 2 111.89 2.524 0.001 0.608 1.000   Join the group Phobia 17.68 2 17.68 2.768 0.099 0.158 0.462   Paranoid 28.77 2 28.77 15.33 0.083 0.169 0.496  |                | Depression          | 109.21  | 2 | 109.21  | 3.087  | 0.064 | 0.184 | 0.541 |
| Join the group Phobia 17.68 2 17.68 2.768 0.099 0.158 0.462   Paranoid 28.77 2 28.77 15.33 0.083 0.169 0.496   |                | Anxiety             | 76.89   | 2 | 76.89   | 20.978 | 0.031 | 0.227 | 0.661 |
| Paranoid 28.77 2 28.77 15.33 0.083 0.169 0.496   |                | Aggression          | 111.89  | 2 | 111.89  | 2.524  | 0.001 | 0.608 | 1.000 |
| Psychosis 43.16 2 43.16 28.08 0.048 0.201 0.590  | Join the group |                     |         | _ |         |        |       |       |       |
|  |                | Psychosis           | 43.16   | 2 | 43.16   | 28.08  | 0.048 | 0.201 | 0.590 |

Results showed that the experimental and control groups in terms of somatization, interpersonal sensitivity, anxiety, aggression, and psychosis there is a significant difference. This means that the mind has knowledge of mental health patients in the post-test in terms of somatization, interpersonal sensitivity, anxiety, aggression, and psychosis increase P<0.01.

#### **Discussion and Conclusion**

The results of the present study showed that mindfulness training could have on the mental health of girls with epilepsy. Psychotherapy in reducing severe emotions epileptic patients is used and research-based treatment of patients, especially children treated by a mental health approach, suggests that psychotherapy in reducing psychological problems associated with Epilepsy is effective. This is the setup in line with previous findings (Penedo, 2007) to the effect of mindfulness in reducing anxiety and depression. Increased attention and awareness of thoughts, emotions and desires positive aspect of mindfulness practice is (Edeh, Toone, 1987), and will coordinate the adaptive behaviors and positive psychological states and improve the ability of individual to individual and social activities and interest in these activities, (Stefansson, 1998). The results showed that mindfulness training in improving psychological well-being, relieve anxiety and anger effectively. It is also consistent with other research (Penedo, 2007; Linden, 2005; Issa, 2006). The results showed that mindfulness predictor of self-regulation behavior and positive emotional states. The increased attention and awareness of thoughts, emotions and desires positive practical positive aspects of mind awareness (Edeh, 1987). Mindfulness training enhances feel and clearly describe non-judgmental and accepting emotions and physical phenomena helps (Issa, 2006). It is proposed to review the effectiveness of mindfulness in other patients. One of the limitations of this study, short sessions and the impact of drugs in disease control Ron was.

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