

EFFECT OF RELAXATION EXERCISES IN GENERALIZED ANXIETY DISORDER (GAD)

Asima Mehboob Khan, Rizwan Taj, Waqas Ahmah, Fareha Iqbal, Sohaib Ahmed

ABSTRACT:

Objective: To see the efficacy of relaxation exercises in patients with GAD, receiving combination of medicine and relaxation exercises in comparison with those who are taking only medicine therapy.

Design: Comparative, intervention based study.

Duration and Place of Study: Study was conducted at both inpatients and out patients units of Psychiatry, Pakistan Institute of Medical Sciences, Islamabad, Pakistan. Duration was over a period of three months.

Subjects and Methods: Study was conducted over a period of three months. Sample consisted of 100 participants. Fifty patients with GAD symptoms were selected for experimental group (including 25 males and 25 females), and same number of patients were taken as control group. Age was ranged from 20 - 50. Hamilton Anxiety Rating Scale, HAM- A was used as research instrument. Progressive muscular relaxation technique was applied on clients in experimental group.

Results: Compared with only anxiolytic receiving group, patients receiving relaxation exercise showed significantly reduced anxiety symptoms by a mean effect of percentage. Relaxation exercise program lasting no more than four weeks, using session duration of at least 30 minutes, and an anxiety report time frame greater than the past week resulted in the largest improvement.

Conclusion: The present results provide clinicians with evidence to recommend exercise training to patients as a means for reducing anxiety symptoms with minimal risk of adverse events. Exercise training may be especially useful for patients who prefer non-pharmacologic treatments because such preferences may influence the magnitude of the treatment outcomes.

Key words: Relaxation exercises, Generalized Anxiety disorder, Anxiolytics

INTRODUCTION

Generalized anxiety disorder (GAD) is an anxiety disorder that is characterized by excessive, uncontrollable and often irrational worry about everyday things that is disproportionate to the actual source of worry. Research, clinical experience and general community agents are promoting the re-evaluation of old and naive forms of therapy as alternatives or adjuncts to pharmacological approaches in a variety of conditions. Relaxation training is probably the most used non-pharmacological treatment used alone or in combination¹. Among the wide range of non-conventional and sometimes doubtful treatments,

Asima Mehboob Khan: Clinical Psychologist, Department of Psychiatry, Pakistan Institute of Medical Sciences Islamabad

Rizwan Taj: Professor, Department of Psychiatry, Pakistan Institute of Medical Sciences Islamabad

Waqas Ahmah: Department of Psychiatry, Pakistan Institute of Medical Sciences Islamabad

Fareha Iqbal: Department of Psychiatry, Pakistan Institute of Medical Sciences Islamabad

Sohaib Ahmed: Department of Psychiatry, Pakistan Institute of Medical Sciences Islamabad

Correspondence:

Prof. Rizwan Taj

E-mail: rizwantaj@yahoo.com

relaxation-based methods such as meditation, progressive muscular relaxation, applied relaxation, mindfulness and autogenic training have received the greatest scientific attention and validation².

This excessive worry often interferes with daily functioning, as individuals suffering GAD typically anticipate disaster, and is overly concerned about everyday matters such as health issues, money, death, family problems, friend problems, relationship problems or work difficulties³. Individuals often exhibit a variety of physical symptoms, including fatigue, fidgeting, headaches, nausea, and numbness in hands and feet, muscle tension, muscle aches, difficulty swallowing bouts of difficulty breathing, difficulty concentrating, trembling, and inability to fully control the anxiety (ICD-10)⁴. These symptoms must be consistent and on-going, persisting at least six months, for a formal diagnosis of GAD to be introduced⁵.

In fact, complaints of anxiety are common among healthy individuals and have been associated with numerous negative health consequences⁶, absenteeism and decreased work productivity⁷.

Relaxation training could be applied as a form of non-pharmacologic treatment which can promote a sense of mastery and control which usually has been lost in anxiety persons.

Although much research remains to be done in this area, Lehrer and Woolfolk's (1993) review of anxiety studies comparing drug and behavioral treatments (relaxation, exposure) is worth mentioning it. They concluded that both treatments have similar short-term effects, but behavioral treatments had better long-term effects than drug treatments⁶.

In this paper we discuss the efficacy of relaxation exercises in patients with Generalized Anxiety Disorder receiving relaxation exercise combination with anxiolytics compared to patients receiving Anxiolytic trial alone.

SUBJECTS AND METHODS

This was an experimental study. It was conducted over a period of three months (Jan 13- Mar 13). Sample consisted of 100 participants. Both experimental and control group consisted of fifty patients in each group (Including 25 males and 25 females). Inclusion criteria were all those

known diagnosed cases of GAD. Diagnosis was made on ICD 10 criterion. Patients with age ranged from 20 yrs - above 50 yrs were included. The data was collected randomly from both out and in patient units of Psychiatry, Pakistan Institute of Medical Sciences, Islamabad, Pakistan. The research instruments used was Hamilton Anxiety Rating Scale; HAM- A. Jacobson's Progressive muscular relaxation technique was applied in patients with GAD in experimental group. Result was computed by using percentages. Chi-Square and p value was calculated.

RESULTS

Result of the study showed that patient in control group who received anxiolytic medication only for the treatment of GAD has significant high score of anxiety level after four weeks as compared with the experimental group patients who were taking prescribed medication along with relaxation techniques. Ages of patients were ranged from 20 years to 50 years in both experimental and control group. Majority of patients (44%) in experimental group were falling in 20-30 years of age while 42% of patients in control group were between 31 to 40 years of age. Demographic details are shown in Table 1.

Scores on HAM – A when administered in first session are shown in Table 2. Results of the study to see efficacy of relaxation techniques after four weeks showed following scores: In experimental group 78% depicted no symptoms of anxiety while 16% showed mild anxiety, 6% had moderate while none of the participants illustrated any evidence of symptoms of severe anxiety. Whereas in the result of control group, 28% showed no symptoms of anxiety while 44% presented with mild anxiety, 20% showed moderate and 8% of the participants exhibit symptoms of severe anxiety (Table 3).

Scores of anxiety level within experimental group before administration of relaxation exercise and four weeks of practicing relaxation exercise were when compared also

Table 1: Demographics features of Experimental Group and Control Group.

	Experimental Group N =50 (%)	Control Group N =50 (%)	Chi-Square (p-Value)
Age Groups (Years)			
20-30	22 (44%)	19 (38%)	
31-40	20 (40 %)	21 (42%)	0 . 4 6 (>0.05)
41-50	8 (16%)	10 (20%)	
Marital Status			
Single	18 (36%)	13 (26%)	
Married	26 (52%)	29 (58%)	1 . 2 6 (>0.05)
Widow/ Divorcee	6 (12%)	8 (16%)	
Education Status			
Matriculation	8 (16%)	2 (4%)	
Intermediate	10 (20%)	8 (16%)	4 . 9 3 (>0.05)
Graduation	17 (34%)	19 (38%)	
Masters	15 (30%)	21 (42%)	
GAD History			
Less than 1 year	25 (50%)	19 (38%)	
1 year	16 (32%)	28 (56%)	7.09 (0.02)
Above 1 year	9 (18%)	3 (6%)	

Table 2: Table showing scores on HAM-A (First time)

	Experimental Group N= 50 (%)	Control Group N= 50 (%)	Chi-Square (p-Value)
Mild Anxiety	14 (28%)	9 (18%)	1.41 (0.49)
Moderate Anxiety	23 (46%)	26 (52%)	
Severe Anxiety	13 (26%)	15 (30%)	

Table 3: Table showing scores on HAM-A after administration of relaxation technique

	Experimental Group (Medicine + Exercise) N= 50 (%)	Control Group (Medicine) N=50 (%)	p-Value
No Anxiety	39 (78%)	14 (28%)	<0.001
Mild Anxiety	8 (16%)	22 (44%)	
Moderate Anxiety	3 (6%)	10 (20%)	
Severe Anxiety	0 (0%)	4 (8%)	

Table 4: Impact of Medication and Exercise on the anxiety levels within Experimental Group.

	Experimental Group (1st Score HAM-A) N= 50 (%)	Experimental Group (2nd Score HAM-A) N=50 (%)	p-Value
No Anxiety	0 (0%)	39 (78%)	<0.001
Mild Anxiety	14 (28%)	8 (16%)	
Moderate Anxiety	23 (46%)	3 (6%)	
Severe Anxiety	13 (26%)	0 (0%)	

showed significant difference Table 4.

DISCUSSION

This study investigated the efficacy of relaxation exercises on patients with GAD, receiving both relaxation exercises and anxiolytics in comparison with patients receiving medicine therapy alone. There are various relaxation methods whose common aim is to reduce tension and anxiety through different techniques⁹. Progressive muscle relaxation technique was used in this study. Relaxation techniques have been used to manage non-clinical anxiety and to treat anxiety disorders in community, hospitalized and psychopathological populations.

Results of this study indicate a significant difference of scores in control and experimental group. In experimental group 78% individuals showed no symptoms of anxiety, 16% with mild features of anxiety and only 6% had moderate symptoms of anxiety. On the other hand, in control group, 28% individuals still showed symptoms of anxiety even after using prescribed anti-anxiety medicine. 44% had mild anxiety, 20% had moderate level of anxiety while 8% still scored high on HAM-A scale.

It is supported by the results that the relaxation exercise can be effective in reducing anxiety in compar-

ison to other forms of treatment. Results also showed improvement in scores of anxiety when compared within experimental group Table 4. It is as effective alone as the two most common treatments for anxiety disorders - psychotherapy and pharmacotherapy respectively.

Result of this study is aligned with the research literature. Relaxation training is especially useful in treating stress and anxiety. Benson, one of the most influential authors in the field of relaxation, defined it as "a state of decreased psycho-physiological arousal: a calming state"¹⁰.

The long-established tradition of teaching progressive relaxation to relieve anxiety may still have some efficacy for the treatment of GAD and possibly panic disorder, especially when the more systematic and intense applied relaxation protocol is employed¹¹.

Many studies support a good efficacy of relaxation trainings in reducing anxiety. For example, in a study by Kanji, White and Ernst, fifty-nine patients were randomly assigned to receive regular autogenic training or no such therapy as an adjunct to standard care for 5 months. State Anxiety showed a significant intergroup difference both at 2 and 5 months. This finding was corroborated by secondary outcome measures, for example quality of life, and by qualitative information about patients' experiences, suggesting that autogenic training may have a role in reducing anxiety of patients undergoing coronary angioplasty¹². Esch et al. declare that relaxation techniques appear to be highly recommendable¹³.

In two recent studies, applied relaxation has proven to be equally as effective in treating GAD as Cognitive therapy, which demands much more of the therapist¹⁴. Findings of the study indicate that relaxation training is effective in reducing anxiety in any kind of participants, regardless of gender, age or may be affected by physical or psychological problems.

CONCLUSION

The present results provide clinicians with evidence to recommend exercise training to patients as a means for reducing anxiety symptoms with minimal risk of adverse events. Exercise training may be especially useful for patients who prefer non-pharmacologic treatments because such preferences may influence the magnitude of the treatment outcomes.

REFERENCES

1. Krisanaprakornkit T, Krisanaprakornkit W, Piyavhatkul N, Laopaiboon M. Meditation therapy for anxiety disorders. *Cochrane Database Syst Rev* 2006;(1):CD004998.
2. Ludwig DS, Kabat-Zinn J. Mindfulness in medicine. *JAMA* 2008;300:1350-2.
3. National Institute of Mental Health. Anxiety disorders [Online]. 2000 [cited on 2008 May 28]. Available from URL: <http://www.nimh.nih.gov/health/publications/>

anxiety-disorders/index.shtml

4. World Health Organization. International statistical classification of diseases and related health problems (ICD-10) in occupational health. Geneva: WHO; 1999.
5. Balon R. Mood, anxiety, and physical illness: body and mind, or mind and body? *Depress Anxiety* 2006;23:377-87.
6. Sanderson K, Tilse E, Nicholson J, Oldenburg B, Graves N. Which presenteeism measures are more sensitive to depression and anxiety? *J Affect Disord* 2007;101:65-74.
7. Lehrer PM, Woolfolk RL. Principles and practice of stress management. 2nd ed. New York: The Guilford Press; 1993.
8. Blumenthal JA, Emery CF, Madden DJ, Schniebolk S, Walsh-Riddle M, George LK, et al. Long-term effects of exercise on psychological functioning in older men and women. *J Gerontol* 1991;46:352-61.
9. Jacobson E. Progressive relaxation: a physiological and clinical investigation of muscular states and their significance in psychology and medical practice. Chicago: University of Chicago Press; 1938.
10. Benson H, Klipper MZ. The relaxation response. New York: William Morrow; 1975.
11. Clark DA, Beck AT. Cognitive therapy of anxiety disorders: science and practice. New York: The Guilford Press; 2010.
12. Ernst E, Kanji N. Autogenic training for stress and anxiety: a systematic review. *Complement Ther Med* 2000;8:106-10.
13. Esch T, Fricchione GL, Stefano GB. The therapeutic use of the relaxation response in stress-related diseases. *Med Sci Monit* 2003;9:23-34.
14. Ost LG, Breitholtz E. Applied relaxation vs. cognitive therapy in the treatment of generalized anxiety disorder. *Behav Res Ther* 2000;38:777-90.