



## A Comparative Analysis between Anxiety Patients Receiving Medication Alone & Medication with Progressive Muscular Relaxation Therapy

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### Abstract

Anxiety disorders are relatively common and patients who have been under prolonged medication for anxiety disorders worry about their dependent on the medication in coping with their problems. Due to numerous unpredictable and unstable circumstances in Manipur, people are more prone to develop anxiety disorder (s) and manifests varied anxiety symptoms. Therefore, the present study takes the initiative to evaluate differences between anxiety patients receiving medication alone & medication with progressive muscular relaxation therapy. The sample of the present study consisted of 30 anxiety patients. The cases included in the study are those patients already been diagnosed as Anxiety Disorders and under medication for a minimum duration of 1 year. Anxiety level of the participants were assessed on State and Trait Anxiety Inventory (STAI) at two levels i.e. pre and post sessions on relaxation therapy. Pre assessment is done at the initial stage and final assessment is done after a gap of three (3) months. This study finds insignificant difference among the participants with respect to their different socio-demographic profile. However, there is highly significant difference with regard to anxiety level on pre state anxiety (Mean±SD=54.233±5.073,  $p$  value= 0.000) and post state anxiety (Mean±SD=49.93±5.601,  $p$  value= 0.000). Likewise, there is highly significant difference with regard to anxiety level on pre trait anxiety (Mean±SD=51.50±6.317,  $p$  value= 0.000) and post trait anxiety (Mean±SD=47.93±5.86,  $p$  value= 0.000). This study finds that medication along with relaxation therapy is more effective than medication alone in treatment of anxiety patients.

**Keywords:** Anxiety, relaxation therapy.

### Introduction

All of us, at one time or another, experience anxiety, a feeling of apprehension or tension, in reaction to stressful situation. Anxiety is a normal reaction to stress that often helps, rather than

hinders, our daily functioning. The experience of anxiety has two components: (i) The awareness of the physiological sensations (e.g., palpitations and sweating) and (ii) The awareness of being nervous or frightened. In addition to motor and visceral

effects, anxiety affects thinking, perception, and learning. Some people experience anxiety for no clear reason. When anxiety occurs without external justification and begins to affect a person's daily functioning, it is considered a psychological problem known as *anxiety disorder*.<sup>1</sup>

An anxiety disorder, as the term suggests, has an unrealistic, irrational fear or anxiety of disabling intensity at its core and also as its principal and most obvious manifestation. Diagnostic and Statistical Manual of Mental Disorders-IV-TR (DSM-IV-TR) recognizes seven (7) primary types of anxiety disorder: phobic disorders of the "specific" or of the "social" type, panic disorders with or without agoraphobia, generalized anxiety disorder, obsessive compulsive disorder, and post-traumatic stress disorder.<sup>2</sup>

In the National Comorbidity Survey, anxiety disorders as a group were the most common kind of disorder for women, affecting approximately 30 percent of the female population at some point in their lives, and the second most common types of disorder in men, affecting approximately 19 percent of the male population at some point. One year prevalence rate for women were 23 percent and for men were 12 percent.<sup>3</sup>

In fact, complaints of anxiety are common among healthy individuals and have been associated with numerous negative health consequences, absenteeism and decreased work productivity. Studies have persistently shown that anxiety disorders produce morbidity, more utilization of health care services, sometimes for long time, functional impairment and personal distress, leading to burden of both private and public health care costs.<sup>4</sup>

Anxiety inflicts its toll through 3 major pathways. In the physiological pathway, anxiety affects the musculo-skeletal system by causing muscular tension; the autonomic nervous system by arousing sympathetic responses; and the psychoneuroendocrine system (hypothalamic-pituitary-adrenal axis) by triggering secretion of catecholamines and glucocorticoids. The

psychological pathway elevates negative mood states, whereas the social-behavioral pathway promotes disconnection from self and others and stress inhibition with resultant unhealthy lifestyle behaviors.<sup>5,6</sup>

Relaxation techniques and biofeedback are used to decrease arousal. Cognitive therapy helps patients to limit cognitive distortions by viewing their worries more realistically, enabling them to make better plans to manage their anxiety. In cognitive therapy, patients may be taught to record their worries, listing evidence that justify or contradict the extent of their concerns. Patients also learn that "worrying about worry" maintains anxiety and that avoidance and procrastination are not effective ways to solve problems.<sup>7</sup>

Types of psychotherapy or behavioral interventions that have been investigated for anxiety in older adults include relaxation training alone (RT), cognitive-behavioral therapy (CBT) without RT, and CBT with RT. RT is easier to conduct than CBT and requires less training on the part of the therapist. Moreover, a recent meta-analysis found no differences between RT and cognitive therapy for GAD in younger adults.<sup>8</sup>

Many studies support a good efficacy of relaxation trainings in reducing anxiety. For example, in a study, fifty-nine patients were randomly assigned to receive regular autogenic training or no such therapy as an adjunct to the standard care for 5 months. State Anxiety showed a significant intergroup difference both at 2 and 5 months. The 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 angioplasty.<sup>9</sup>

Progressive muscular relaxation represents a group of therapeutic techniques that seek to reduce one of the physiological manifestations of anxiety by teaching a person to be aware of muscle tension and to release that tension. One common system of progressive muscular relaxation involves tensing and releasing various

muscle groups until a deeply relaxed state can be achieved through simply recalling the feeling of relaxed muscles. Progressive muscular relaxation is used in various populations to alleviate a range of complaints including anxiety, depression, and psychophysiological disorders.<sup>10</sup>

The basic premise of Muscle Relaxation Therapy is that anxiety manifests itself in tense and rigid muscles (neck, shoulders, jaw, etc.), and that by reducing the tension in these muscles, the person experiences a sense of relaxation and lowers anxiety. The most common form of this is progressive muscular relaxation, which is where a therapist (or even an audio recording) can guide a person through tensing and releasing all of the muscle groups in the body, paying particular attention to the sensations and feelings associated with releasing the tension. This technique has received a fairly large amount of research support, but the actual process of how it is effective at a psychobiological level is not completely understood.<sup>11</sup>

Moreover, in a general review on therapeutic use of relaxation response in stress-related diseases, it has been declared that relaxation techniques appear to be highly recommendable.<sup>12</sup> Many studies have been conducted that have shown a positive clinical outcome of the relaxation techniques in connection with anxiety.<sup>13, 14</sup> An old meta-analysis<sup>15</sup>, published in 1989 about the effects of relaxation trainings on trait anxiety found that relaxation techniques had a medium effect size, while transcendental meditation had significantly larger effect size.

### Need of the Present Study

Anxiety disorders are relatively common and those who have been under medication for anxiety disorders for more than one year have worry about their dependent on the medicine for their problems. The need for the study was implemented to explore the effectiveness of relaxation therapy as an adjunct therapy for anxiety patients. And also in Manipur the numbers of anxiety cases are increasing. Findings of this

study may be useful in clinical research and clinical setting. Moreover, the patients will learn the relaxation techniques to reduce some form anxiety when they appear to come out of blue. And there is no sufficient work done is available in Manipur.

### Statement of the Problem

To assess and compare the anxiety level of anxiety patients receiving medication alone and medication with relaxation therapy. And to evaluate the efficacy of relaxation therapy in the treatment of anxiety patients. The present research aimed at comparing the effectiveness of medication alone and medication with relaxation therapy on anxiety patients.

### Objectives

1. To assess the anxiety level of anxiety patients receiving medication alone and medication with relaxation therapy.
2. To evaluate the efficacy of relaxation therapy in the treatment of anxiety patients.

### Informed Consent

Each participant was explained thoroughly about the aims and objective of the study and verbal informed consent was taken from each patient prior to the inclusion to the present study.

### Materials & Methods

The sample of this study consists of 30 anxiety patients. The sample of study are patients already been diagnosed as Anxiety Disorders and under medication for a minimum duration of 1 year. State and trait anxiety inventory is assessed twice i.e. pre and post relaxation therapy sessions. First assessment is done at the initial meeting and post assessment is done after a gap of three months.

### Assessment Tools

1. State Trait Anxiety Inventory (STAI; Spielberg et al., 1983)
2. Progressive muscular relaxation therapy.

**The State-Trait Anxiety Inventory (STAI)** <sup>28</sup> has been used extensively in research and clinical practice. It comprises separate self-report scales for measuring state and trait anxiety. The S-Anxiety scale (STAI Form Y-1) consists of twenty statements that evaluate how respondents feel “right now, at this moment.” The T-Anxiety Scale (STAI Form Y-2) consists of twenty statements that assess how people generally feel. The STAI-Y S-Anxiety Scale is printed on opposite sides of a singled-page test form. Alpha co-efficient for the S-Anxiety and T-Anxiety Scales computed by formula KR-20 as modified by Cronbach (1951) shows that the S-Anxiety alphas were above 0.90 for the samples of working adults, students, and military recruit, with a median coefficient of 0.93. The alpha coefficients for the T-Anxiety scale were also uniformly high, with a median coefficient of 0.90. The S-Anxiety and T-Anxiety alpha coefficient for the working adults remained high over the entire age range.

**Inclusive Criteria**

1. Anxiety patients under medication for a minimum period of 1 year.

**Exclusive Criteria**

1. Anxiety patients who are under medication for less than one year.
2. Anxiety patients with another co-morbid psychiatric condition.

**Analysis of the Data**

Analysis was carried out using quantitative methods. Statistical techniques such as t-test and ANOVA were used to study the significance of difference between the mean values.

**Results & Discussion**

The socio-demographic profile of the study sample consisted of age, sex, education qualification, marital status, family type and income. Findings on the socio-demographic characteristics are as follows-

**Table 1:** Age wise distribution of pre and post state & trait-anxiety

Age group		20-25	26-30	31-35	36-40	41-45	46-50	F value	P value	Remark
Mean ±SD	Pre state-anxiety	53.85±5.72	55.37±6.50	54.40±7.12	48.00±6.03	53.5±3.20	52.00±8.71	.234	.944	IS
	Post state-anxiety	48.71±6.49	52.00±5.12	50.80±6.76	46.00±5.15	50.50±3.56	46.00±7.54	.675	.647	IS
	Pre trait-anxiety	51.14±7.12	53.00±6.68	52.20±8.52	52.00±7.32	51.00±3.74	48.00±7.21	.262	.930	IS
	Post trait-anxiety	46.14±4.56	50.00±6.76	48.20±7.26	50.00±4.57	48.83±6.82	43.66±4.65	.662	.656	IS

IS-insignificant

From the table, there is no significant difference of the pre state-anxiety level (f value=.234; p value >0.05) and post state anxiety level (f value=0.675; p value >0.05) among the different age groups. However, the mean value is higher in 26-

30 yrs than the other age group. Likewise, there is no significant difference of pre trait anxiety level (f value=0.262; p value >0.05) and post trait anxiety level (f value=0.662, p value>0.05) among the different age groups.

**Table 2:** Sex wise distribution of pre and post state & trait-anxiety

Anxiety types	Sex	Mean ±SD	f-value	p-value	Remarks
Pre state	Male	53.43±4.939	.660	.424	IS
	Female	55.14±6.538			
Pre trait	Male	50.62±4.129	1.234	.276	IS
	Female	52.50±8.206			
Post state	Male	48.87±4.856	.650	.427	IS
	Female	51.14±6.310			
Post trait	Male	46.125±4.303	3.552	.70	IS
	Female	50.00±6.827			

IS-insignificant

Findings from table 2, there is no significance difference of pre state anxiety level (f value=0.66; p value>0.05) and pre trait anxiety level (f value=1.234; p value >0.05) between male and female. Similarly, no significant difference of post state anxiety level (f value=0.650; p value >0.05)

and post trait anxiety level (f value=3.552; p value >0.05) was found between male and female. However, the female’s mean value is comparative higher in pre & post state and also in pre & post trait.

**Table 3:** Distribution of pre and post state & trait-anxiety on different educational qualification

Educational qualification		VIII passed	X passed	XII passed	Graduate	Master	f-value	p-value	Remarks
Mean ±S.D.	Pre state-anxiety	55.60±8.87	55.62±6.41	52.00±4.60	53.62±3.77	52.66±5.03	.609	.66	IS
	Pre trait-anxiety	53.20±8.40	51.37±6.16	46.83±4.57	50.37±3.15	45.66±1.15	1.582	.210	IS
	Post state-anxiety	56.80±8.0	50.37±4.77	50.75±7.00	50.75±3.24	50.00±1.00	1.076	.389	IS
	Post trait-anxiety	52.80±8.89	48.62±4.86	46.16±4.21	47.75±4.65	42.00±3.60	2.060	.116	IS

IS-insignificant

Table 3- no significant difference based on educational qualifications was found on the subtypes of the anxiety scale viz. pre state anxiety level (f value=.609; p value >0.05), pre trait

anxiety level (f value= 1.582; p value >0.05); post state anxiety level (f value= 1.076; p value >0.05) and post trait anxiety level (f value= 2.060; p value >0.05).

**Table 4:** Distribution of pre and post state & trait-anxiety on marital status group

Anxiety types	Marital status	Mean ± SD	f-value	p-value	Remarks
Pre state	Single	52.25±3.596	1.337	.28	IS
	Married	55.55±6.518			
Pre trait	Single	48.08±3.50	1.606	.32	IS
	Married	51.16±6.44			
Post state	Single	50.16±5.04	.430	.65	IS
	Married	52.38±7.03			
Post trait	Single	46.16±3.78	.916	.412	IS
	Married	49.11±6.75			

IS-insignificant

Table 4- shows that there is no significant difference between single & unmarried participants on pre state anxiety (f value=1.337; p value >0.05); pre trait anxiety (f value= 1.606; p

value >0.05); post state anxiety (f value= .430; p value >0.05) and post trait anxiety (f value= .916; p value >0.05).

**Table 5:** Distribution on Anxiety of different family type

Anxiety type	Family type	Mean ±SD	f-value	p-value	Remarks
Pre state	Nuclear	52.30±3.945	1.769	.19	IS
	Joint	55.20±6.271			
Pre trait	Nuclear	50.70±3.94	.235	.632	IS
	Joint	51.90±7.28			
Post state	Nuclear	49.20±3.852	.250	.621	IS
	Joint	50.30±6.358			
Post trait	Nuclear	47.30±5.271	.170	.683	IS
	Joint	48.25±6.239			

IS-insignificant

As indicated in table 5, based on family type, there is no significant difference of pre state anxiety (f value=1.769; p value >0.05); pre trait

anxiety (f value= .235; p value >0.05); post state anxiety (f value= .250; p value >0.05) and post trait anxiety (f value= .170; p value >0.05).

**Table 6:** Distribution of pre and post state & trait-anxiety

Anxiety state	Income	Mean ±S.D.	f-value	p-value	Remarks
Pre state anxiety	<5000	55.58±6.097	.447	.772	IS
	5001-1,0000	52.66±6.344			
	10,001-15000	54.40±4.33			
	15,001-20,000	53.50±5.50			
Post trait anxiety	<5000	51.16±7.09	.218	.883	IS
	5001-1,0000	51.55±7.90			
	10,001-15000	53.40±3.20			
	15,001-20,000	50.00±3.36			
Post state Anxiety	<5000	50.50±5.53	.412	.746	IS
	5001-1,0000	48.66±6.76			
	10,001-15000	51.80±4.91			
	15,001-20,000	48.75±4.78			
Post trait Anxiety	<5000	48.33±6.58	.600	.621	IS
	5001-1,0000	47.66±5.47			
	10,001-15000	50.00±3.74			
	15,001-20,000	44.75±7.32			

IS-insignificant

Table 6- based on income; there is no significant difference of anxiety on pre and post state as well as trait anxiety.

Therefore, this study finds no significant difference among the participants with respect to their different socio-demographic profile i.e. age, sex, education qualification, marital status, family type and income.

**Table 7:** Distribution of Pre and Post State & Trait Anxiety

Anxiety type	Mean±SD	t value	p value
Pre state	54.233±5.073	5.964	0.000**
Post state	49.93±5.601		
Pre Trait	51.50±6.317	5.762	0.000**
Post Trait	47.93±5.86		

\*Correlation is significant at the 0.05 level (2-tailed).

\*\*Correlation is significant at the 0.01 level (2-tailed).

Table 7 – the study found a significant relationship between pre & post state anxiety (t value=5.964; P=0.000) as well as pre & post trait anxiety (t value=5.762; p= 0.000) of the participants after combined treatment of medication and the relaxation therapy are given.

Peter P. and Roy-Byrne, (2005)<sup>17</sup> found the combined cognitive-behavioral and pharmacotherapeutic intervention resulted in sustained and gradually increasing improvement relative to treatment as usual. Studies suggest a complex relationship between cognitive-behavior therapy (CBT) and pharmacotherapy for the combined treatment of mood disorders and anxiety disorders. Another study found that for the anxiety disorders, there are some benefits in the short term, but combined treatment may limit the maintenance of treatment gains offered by CBT alone.<sup>18</sup> Another study supports the current finding that cognitive therapy (targeting worry), applied relaxation (AR) and self-control desensitization (targeting somatic anxiety), and a combination of these methods were equally efficacious for the treatment of GAD.<sup>19</sup> Supporting the current study, a study found significant efficacy of relaxation training in reducing anxiety. Their analysis extends the existing literature through facilitation of a better understanding of the variability and clinical significance of anxiety improvement subsequent to relaxation training.<sup>20</sup>

## Conclusion

The present study takes the initiative to evaluate the efficacy of progressive muscular relaxation therapy as an adjunct to medication in the treatment of anxiety patients. The present study finds that medication and relaxation therapy combined treatment mode is more effective for anxiety patients. Therefore, it is recommendable for the anxiety patients to practice progressive muscular relaxation in addition to medication.

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