THE SCIENTIFIC TEMPER ISSN 0976 8653

VOL -VII, No. 1&2, January-2016

Progressive Muscular Relaxation in Schizophrenic Patients : A Pilot Study

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ABSTRACT

The feasibility and efficacy of relaxation techniques with non psychotic individuals, there is still paucity of researches on the effects of relaxation training applied on schizophrenic patients. Current theoretical speculation and research evidences suggest that elevated anxiety level, stress & tension and poor anxiety coping skills may be important aspects of the schizophrenic process. This study evaluated the effectiveness of progressive muscular relaxation in the treatment of persons with schizophrenia who experienced significant anxiety and stress with residual symptoms despite their adherence to medication. 05 medicated schizophrenic female patients were taken for treatment. After twenty two weeks of training, subjects reported lower level of anxiety and stress.

INTRODUCTION

Progressive relaxation therapy is a form of relaxation therapy which focuses for its effects upon successive tensing and relaxing of each of the 15 major muscle groups. It was developed by American physician Edmund Jacobson in the early 1920s (Jacobson, 1938). Jacobson argued that since muscle tension accompanies anxiety, one can reduce anxiety by learning how to relax the muscular tension. PMR entails a physical and mental component.

The physical component involves the tensing and relaxing of muscle groups over the legs, abdomen, chest, arms and face. With the eyes closed and in a sequential pattern, a tension in a given muscle group is purposefully done for approximately 10 seconds and then released for 20 seconds before continuing with the next muscle group.

The mental component focuses on the difference between the feelings of the tension and relaxation. Because the eyes are closed, one is forced to concentrate on the sensation of tension and relaxation. The patient is told to simply focus on the feelings of the tensed muscle. Because of the feelings of warmth and heaviness are felt in the relaxed muscle after it is tensed, a mental relaxation is felt as a result. With practice, the patient learns how to effectively relax and deter anxiety when it becomes at an unhealthy level where an anxiety attack would otherwise occur (Craske & Barlow, 2006). Jacobson trained his patients to voluntarily relax certain muscles in their body in order to reduce anxiety symptoms. He also found that the relaxation procedure is effective against ulcers, insomnia, and hypertension. There are many parallels with autogenic training, which was developed independently. The technique has also proven effective in reducing acute anxiety in people with Schizophrenia (Chen et al. 2009).

Relaxation method: - Progressive relaxation involves alternately tensing and relaxing the muscles (Wolpe &Lazarus, A.A.1966). A person using PMR may start by sitting or lying down in a comfortable position. With the eyes closed, the muscles are tensed (10 seconds) and relaxed (20 seconds) sequentially through various parts of the body. The whole PMR session takes approximately 30 minutes. As this is a technique, practice with PMR does make perfect and will usually not work effectively as it should the first couple of times.

Schizophrenia: - Schizophrenia is a form of psychosis that shifts sufferers from reality to an often terrifying world of delusions, confusion, and hallucinations. Often the symptoms of schizophrenia are described as “positive” or “negative.” The prevalence of schizophrenia is approximately 0.85 percent of the population worldwide and is fairly consistent across race and geographical regions. Men and women are equally affected. Average age of onset in men is 15 to 25 years of age, while in women it is 25 to 35 years of age. The symptoms are organized into three major categories: positive symptoms, negative symptoms, and cognitive impairment.

Positive symptoms include hallucinations, delusions, thought disorders, and bizarre behaviors. Hallucinations are most commonly auditory, usually experienced as voices talking to or about the person. Delusions are false beliefs and tend to be paranoid, grandiose, or bizarre in nature. Disorganized speech is presumed to be a manifestation of an underlying thought disorder. The flow of ideas is illogical and may range from being mildly confusing to incomprehensible. Words may be strung together based on sound rather than meaning, or entirely new words may be created. Bizarre behavior may be observed as repetitive movements, unusual mannerisms, odd ways of dressing, and disregard for social norms.

Negative symptoms include flat affect (facial expression), avolition, and apathy. A flat affect is one revealing little emotion or expression. Generally, persons with schizophrenia seem emotionally disconnected and tend to be socially withdrawn. Avolition and apathy are characterized by a lack of motivation and poor grooming and hygiene.

In addition to the positive and negative symptoms of schizophrenia, cognitive impairment with deficits in attention span, memory, and information processing is often present. Persons with schizophrenia experience varying constellations and severities of symptoms resulting in a range of impaired functioning. Sometimes anxiety plays a significant role in symptoms of schizophrenia. Cutler and Siris (1991) observed in a sample of 45 patients diagnosed with schizophrenia, in which 11 met criteria for panic disorder. Cassano etal. (1998) reported that co-morbidity of anxiety symptoms were related to insight in patients with schizophrenia. Huppert and Smith (2005) found anxiety disorders are common in schizophrenic patients and the presence of these symptoms may influence the core psychotic symptoms and quality of life.

Progressive Muscular Relaxation has been widely used and its effectiveness established with numerous patient populations. However there has been limited application of relaxation techniques in the treatment of schizophrenic patients and little research regarding its efficacy. This neglect may be due to the dominance of pharmacological treatment and less use of psychotherapy, the severity of the disorder, or the inadequacies of previous attempts to understand and manage schizophrenia. The objective of this study was to examine the efficacy of progressive relaxation training on anxiety in patients with schizophrenia.

METHOD

Participants

The study was comprised of the patients suffering from Schizophrenia. The sample consisted of 05 female schizophrenic inpatients of age range 35- 50 years. Patients were recruited from the female inpatient ward of Mental hospital, Bareilly. Diagnoses were made according to DSM-IV-TR criteria with case study format. Inclusion criteria were one of the previously cited diagnoses and the presence of anxiety and psychotic symptoms, duration of illness was greater than 10 years and patients were hospitalized and on pharmacological treatment for last 5 years. There is absence of positive symptoms and presence of restlessness, tension and free-floating anxiety along with negative symptoms of schizophrenia. Exclusion criteria were organic illness involving the central nervous system, current substance abuse and /or past and current alcohol dependence, and clinical evidence of mental retardation.

Measures

The test instruments that were selected for the present study were Brief Psychiatric Rating Scale (BPRS) and Global Assessment of Functioning (GAF) Scale. The BPRS developed by Overall and Gorham (1962), is widely used, relatively brief scale that measures psychotic and non psychotic symptoms in individual with a major psychiatric disorder. GAF has been developed by the American Psychiatric Association DSM-IV-TR (2000). GAF has 10 items and BPRS has 18 items of assessment. It has taken approximately one hour to conduct clinical interview and the assessment on the scales. The effectiveness of the treatment techniques will be assessed on

the basis of the difference between Pre and Post treatment assessment scores on GAF and BPRS.

Procedure

Patients were approached to participate in the study and only those who volunteered and gave informed consent were included in the study. Baseline observations were made and any type of psychotherapy was not provided during this duration. Subjects were observed, interviewed, diagnosed and rated on the measures used in the study. A warm empathetic and genuine therapeutic relationship was established with the patients. Patients of the present study have received training in PMR. The treatment continued for 22 weeks, and sessions were thrice a week on alternate days initially and reduced to twice a week from 15 week. Each session was of around 45 minutes. At the termination of therapy subjects were assessed on BPRS and GAF scales. They were guided to continue the relaxation practice and indulge in social interactions. The patients were followed up for 2 weeks to monitor the effectiveness of the treatment.

RESULT AND DISCUSSION

Patients were observed twice a week for an initial 2 week period in their ward. The baseline period was followed by Progressive Muscular Relaxation training. The BPRS scores of anxiety and tension during baseline, intervention and follow-up are presented in the table 1 & 2.

A perusal of table 1 and 2 reveals that all cases were showing extremely severe to moderately severe anxiety and tension in baseline observation. There was no difference in their anxiety and tension during initially phase of intervention up to 6 weeks. Gradually patients show improvement from week 15 and there is much decrease of anxiety and tension by 21st week.

The BPRS and GAF scores of the patients after the treatment and follow-up of two weeks have been presented in table 3

Table 3 reflected that patients have shown observable improvement on BPRS and GAF Scores at the termination of the treatment and during follow-up. In the present study a reduction of anxiety and tension scores on BPRS and an increase in GAF rating was seen. The heightened motor activation and restlessness of the patients were reduced. There was observable decrease in anxiety scores indicate decreasing over concern, fear and worry of the patients. GAF Scores of the patients were better after treatment.

The result of present study is consistent with Chu et al (2009) finding that the degree of anxiety improvement was significantly higher in the progressive muscular training group than in the control group of acute schizophrenic patients.

It can be concluded that progressive muscle relaxation training can effectively alleviate anxiety in patients with schizophrenia.

Table 1 BPRS scores of Baseline, Intervention and Follow-up of Schizophrenic Patients on Anxiety

CASES / **PROCEDURE DURATION**		CASE 1	CASE2	CASE3	CASE4	CASE5
Baseline	Week 1	6	5	6	7	5
	Week 2	6	5	7	6	6
Intervention	Week 3	6.0	5.3	6.0	7.0	5.7
	Week 6	5.7	5.0	5.3	6.3	5.7
	Week 9	5.7	4.7	5.7	6.0	5.3
	Week 12	4.7	3.7	5.0	5.7	4.7
	Week 15	4.3	3.3	4.3	4.7	4.0
	Week 18	3.7	3.0	2.7	4.7	3.3
	Week 21	2.3	2.0	2.3	3.3	2.0
Follow-up	After 1 week	3	2	2	3	2
	After 2 week	3	2	2	3	3

Table 2 BPRS Scores of Baseline, Intervention and Follow-up of Schizophrenic Patients on Tension

CASES / **PROCEDURE DURATION**		CASE 1	CASE2	CASE3	CASE4	CASE5
Baseline	Week 1	7	5	5	7	6
	Week 2	6	6	6	7	6
Intervention	Week 3	6.0	6.0	6.0	7.0	6.0
	Week 6	5.7	5.7	5.3	6.7	5.7
	Week 9	5.3	5.7	5.3	6.0	5.3
	Week 12	5.3	5.0	5.0	5.7	5.3
	Week 15	5.0	4.7	4.3	5.0	4.7
	Week 18	4.7	4.0	3.3	4.3	4.0
	Week 21	3.0	3.7	3.3	3.7	3.3
Follow-up	After 1 week	3	4	3	4	3
	After 2 week	3	3	2	4	4

Table 3 BPRS and GAF scores of Schizophrenic Patients

Sl. No	**CASES**	**BPRS SCORES**								**GAF SCORES**	
		ANXIETY				***TENSION***					
		Pre-Therapy	Post Therapy	Follow-up		Pre Therapy	Post Therapy	Follow-up		Pre Therapy	Post Therapy
				W1	W2			W1	W2		
1	Case 1	6	2.3	3	3	6	3.0	3	3	42	52
2	Case 2	5	2.0	2	2	6	3.7	4	3	38	48
3	Case 3	7	2.3	2	2	6	3.3	3	2	28	38
4	Case 4	6	3.3	3	3	7	3.7	4	4	32	45
5	Case 5	6	2.0	2	3	6	3.3	3	4	38	52

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