



## A Study to Assess Effectiveness of Progressive Muscle Relaxation Therapy on Anxiety among Elderly in Selected Senior Citizen Club at Sangli, Miraj, Kupwad Corporation Area

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### Article Info

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### ABSTRACT:

Most people suffer from anxiety disorders, which are very common. Anxiety is a condition that affects 10 to 20 percent of older adults, and it can have a significant negative effect on your quality of life. Thankfully, there are numerous approaches to handling it. It's also important to recognize the signs of anxiety in seniors. Being irritable, startling easily, having difficulty sleeping, and withdrawing from others can all be symptoms of anxiety.<sup>1</sup> However, elderly adults are more likely to mention their physical symptoms than their mental or emotional ones. Headaches, muscle tension, nausea, digestive issues, and a racing heartbeat may be signs of anxiety if there's no physical cause of these problems. Ageing is a stage of life and a biological process that can never be stopped. The term "aged" or "elderly" refers to people who have reached the age of sixty or older. They are also regarded as beings who have reached the "third age.". According to Lockwood, old age marks the end of a person's lifespan. Every Gray hair serves as a storehouse of wisdom and experience.<sup>2</sup> The present study was conducted to assess the level of anxiety in elderly. The study included 80 elderly living in Sangli, Miraj and Kupwad corporation area. Quasi Experimental Pre- Post Control Group Design was used for study. Zung's Self Rating Anxiety Scale was used to collect the data.

Keywords: effect, elderly, anxiety, progressive muscle relaxation therapy.

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## 1. Introduction

Old age is an incurable disease, to quote Seneca, but more recently, Ross said: "You do not heal old age. Therefore, old age should be regarded as a typical, inevitable biological phenomenon. You protect it, promote it, and you extend it."<sup>1</sup> The greying of the population is one of the 20th century's most significant characteristics, and the first three years of the 21st century are referred to as the "age of ageing." People of all ages frequently experience anxiety or nervousness, which is a common emotion in response to stress. Anxiety can help us deal with issues and strange situations, and it can even help us avoid danger. The fear of getting sick, interacting with new people, and frightening events is common. However, it may be a medical condition if a person experiences anxiety frequently, in a way that interferes with daily activities, their social life, and their relationships. Even though it frequently goes undiagnosed, anxiety affects as many as 10–20 percent of older adults. The most prevalent form of anxiety is phobia, which occurs when a person is afraid of particular objects, environments, or occasions. Anxiety is the most prevalent mental health issue among adults for women and the second most prevalent for men, right behind substance abuse. For a variety of reasons, anxiety disorders in older adults frequently go untreated. Many times, older people do not acknowledge or recognize their symptoms. When they do, they might be hesitant to talk about their emotions with their doctors. Older adults who have experienced anxiety symptoms for the majority of their lives and think the feelings are normal may choose not to seek treatment. Due to the use of prescription drugs, additional medical conditions, or particular circumstances that the patient is managing, both patients and doctors may fail to diagnose anxiety.

### Objective

1. To assess the level of anxiety among elderly in experimental and control group before Progressive Muscle Relaxation therapy.
2. To assess the level of anxiety among elderly in experimental group and control group after administration of Progressive Muscle Relaxation therapy in the experimental group.
3. To compare the level of anxiety after the intervention in the experimental and control group.
4. To find the association between level of anxiety in selected demographic variables.

## 2. Material and Method

Quantitative approach with pre-post control group research design (Quasi experimental) was used for this study. Conceptual framework based on general system theory (von Bertalanffy 1968) eighty elderly who had anxiety were selected by non-probability purposive sampling technique (40 experimental group and 40 control group). Experimental group receive therapy for ten days. Data was collected by using demographic data, Zung's Self Rating Anxiety Scale for assessment of level of anxiety. The data was analyzed using descriptive and inferential statistics.

## 3. Results

**Section I- Frequency and percentage wise distribution of selected demographic variables among elderly.**

Table No. 1: Frequency and percentage distribution of the socio- demographic variables among elderly.

Sr. No.	Demographic variables		Control Group		Experimental group	
			Frequency	Percentage	Frequency	Percentage
1	Age (in year)	61-65	6	15	11	27.5
		66-70	18	45	8	20
		71-75	10	25	13	32
		76-80	6	15	8	20
2	Gender	Male	20	50	20	50
		Female	20	50	20	50
3	Education	Primary	19	47.5	11	27.5
		Secondary	12	30	6	15
		Degree	9	22.5	17	42.5
		PG Degree	0	0	6	15
4	Profession	Business	18	45	22	55
		Service	2	5	6	15
		Housewife	20	50	12	30
5	Marital Status	Married	40	100	37	92.5
		Unmarried	0	0	1	2.5
		Divorced	0	0	1	2.5
		Widow	0	0	1	2.5
6	Religion	Hindu	39	97.5	39	97.5
		Jain	1	2.5	1	2.5

N= (40+40)

The data represented in table no.1 indicates that, the overall analysis demographic characteristics was carried out to find the frequency and percentage of 40 participants in each (control and experimental) group. In the category of age maximum samples 45% were from age group of 60 to 70 year in control group, and maximum samples 32% were from age group of 71 to 75 year In the category of gender in both the group was equal.

In the category of education elderly having primary & secondary education as well as degree and PG degree. 47.5% elderly having primary education in control group and 42.5% elderly having degree holder in experimental group. In the category of profession business, service and house wife the maximum score was 45% in business in control group and 55% in experimental group. In the category of marital status 100% were married in control group, 92.5% in experimental group. In the category of religion 97.5% from Hindu in control group as well as experimental group.

### Section II- Level of anxiety among elderly in experimental and control group before progressive muscle relaxation therapy.

Table No. 2: Level of anxiety among elderly in experimental and control group before Administration of progressive muscle relaxation therapy.

Pre- test	Frequency			Max. Score	Mean	S.D.	Mean %
	Below 45 score (Normal)	45-59 score (Moderate)	60-75 score and above (Severe)				
Experimental group	0	37	3	63	50.9	3.64	80.79
Control group	0	39	1	63	49.85	4.90	79.12

N= (40+40)

The mean anxiety score before the administration of progressive muscle relaxation is low in experimental group mean percentage was 80.79% as well as in control group mean percentage was 79.12%. Which means, anxiety level among elderly is maximum before administration of progressive muscle relaxation therapy in experimental group.

### Section III-level of anxiety among elderly in experimental and control group after administration progressive muscle relaxation therapy in the experimental group.

Table No. 3: level of anxiety among elderly in experimental and control group after administration of progressive muscle relaxation therapy in the experimental group.

Post- test	Frequency			Max. Score	Mean	S.D	Mean %
	Below 45 score (Normal)	45-59 score (Moderate)	60-75 score and above (Severe)				
Experimental group	40	0	0	44	43	1.51	97.72
Control group	0	36	4	65	51.85	5.25	79.76

N= (40+40)

The mean anxiety score after the administration of progressive muscle relaxation is high in experimental group mean percentage was 97.72% as well as in control group mean percentage

was 79.12%. Which means, anxiety level among elderly is minimum or no anxiety after administration of progressive muscle relaxation therapy in experimental group. Which means, anxiety level among elderly is decreases after progressive muscle relaxation therapy in experimental group.

#### Section IV- To compare the level of anxiety after the intervention in the experimental and control group by using Unpaired t- test.

Table No. 4: To compare the level of anxiety in post-test in the experimental and control group by using Unpaired t- test.

SN	Post- test	Mean	S.D.	d.f.	Unpaired t- test	p-value
1	Experimental Group	43	1.51	39	10.2317	0.00001 <0.05
2	Control Group	51.85	5.25			

N= (40+40)

The table no. 4 shows, post-test comparison of anxiety among elderly in control and experimental group. From above, the p value is 0.00001, which is less than 0.05 (5 % level of significance). Progressive muscle relaxation was significantly effective (t- value = 10.2317, p= 0.00001<0.05). There is significant decrease in level of anxiety after intervention in experimental group.

Table No4: Frequency wise distribution of anxiety level among elderly according to pre- test and post- test in control and experimental group.

Anxiety Level	Control Group		Experimental group	
	Pre test	Post test	Pre test	Post test
<b>Below 45 (Normal)</b>	0	0	0	40
<b>45 – 59 (Moderate)</b>	39	36	37	0
<b>60 – 74 (Severe)</b>	1	4	0	0

N= (40+40)

#### Section V- Significant association the with pre-test anxiety of experimental and control group in elderly.

Table No. 5: Find the Significant association between pre-test levels of anxiety with the selected demographic variables in elderly

Demographic variables	f	Anxiety level			Chi Square value	d. f.	p value	Significance
		Normal	Moderate	Severe				
Age (in year)	61-65	17	16	1	3.958	3	0.266	Not
	66-70	26	26	0				

	71-75	23	22	1	0			>0.05	Significant
	76-80	14	12	2	0				
Gender	Male	40	39	1	0	1.053	1	0.305 >0.05	Not Significant
	Female	40	37	3	0				
Education	Primary	30	26	4	0	8.018	3	0.047 <0.05	<b>Significant</b>
	Secondary	18	18	0	0				
	Degree	26	26	0	0				
	PG Degree	6	6	0	0				
Profession	Job	40	39	1	0	1.579	2	0.454 >0.05	Not Significant
	Business	8	7	1	0				
	Housewife	32	30	2	0				
Marital Status	Married	77	73	4	0	0.164	6	0.983 <0.05	Not Significant
	Unmarried	1	1	0	0				
	Divorced	1	1	0	0				
	Widow	1	1	0	0				
Religion	Hindu	78	74	4	0	0.108	1	0.742 >0.05	Not Significant
	Muslim	0	0	0	0				
	Jain	2	0	2	0				
	Other	0	0	0	0				

N= (40+40)

### Interpretation

The above table depicts,

The association of Pre-existing level of anxiety with their age, gender, profession, marital status and religion the p-value is greater than 0.05 (5% level of significance). So, there is no significant association between the age, gender, profession, marital status and religion among elderly with anxiety. In the association of Pre-existing level of anxiety with the EDUCATION, the p-value is less than 0.05 at 5% level of significance. So that, there is significant association of pre-existing level of anxiety with EDUCATION among elderly.

### 4. Conclusion

The analysis and interpretation on 80 elderly was done. Analysis was carried out based on the predefined objectives of study and hypothesis.

Frequency and percentage distribution was used to explain the demographic variables. Effectiveness of progressive muscle relaxation therapy on elderly by comparing mean of pre-

test and post-test knowledge score which shows that the progressive muscle relaxation therapy was effective in decreasing level of anxiety.

Hence H<sub>0</sub>(null hypothesis) is rejected and H<sub>1</sub>(Research hypothesis) is accepted.

### **Implication**

The present study findings have application for nursing education, nursing administration and nursing research.

### **Nursing Education**

- The nursing curriculum can include the utilization of different modalities for better quality of life of these patients, which is easily available, easily applicable and useful for their better life.
- Nurse can encourage patient for progressive muscle relaxation therapy, student can give health education to patient regarding exercises in clinical area.

Nursing education is developing rapidly in India and nurses from our country can be found all over the world providing care and education. Education faces tremendous challenges in keeping pace with the changes in nursing practice to provide a best quality of care.

### **Nursing Administration**

- The nurse can encourage patient for intervention of exercises for reducing the patient anxiety.
- The nurse administrator, nurse educator can enhance the nurse's knowledge through various programmes like in service education, World Mental Health Day and within various health related camps.

Nurses have to increase their knowledge and skills at various health setting to provide better facilities as per the rapid changing and challenging world. This is cost effective and can also help to reduce level of anxiety among elderly. Nurse leaders can make policy, manual and procedure on the topic. Also nurse manager must deal with legal and ethical issues related to the topic.

### **Nursing Research**

- Present research findings will help to develop nursing knowledge and uplift the nursing profession
- It is proved that progressive muscle relaxation therapy is helpful in reduction in anxiety, among elderly and it is useful for improving quality of life.
- It can be used with reference of further studies and according to following recommendations anyone can go for study related to administration of progressive muscle relaxation therapy among elderly with other disease conditions. Nursing research is an essential aspect of nursing education as it uplifts the profession, develops new nursing norms and enhances the body of nursing knowledge. There is need to promote research-based practice and use of various evaluation methods to measure the outcome of interventions and document the quality and cost effectiveness of care, as nursing is moving towards an independent professional practice within developing countries.

### **Limitations**

The elderly who lacked enthusiasm for practicing Progressive The art of relaxing the muscles. Challenges older people encounter when learning the progressive muscle relaxation technique.

## Recommendation

The nurse can conduct this research in different setting by taking more sample size, specific age group, and level of anxiety. On the basis of findings of the study. It is recommended that

1. A similar study can be conducted with small sample size with number of cycles and duration.
2. A similar study can be performed to assess the effectiveness of progressive muscle relaxation therapy in various kinds of diseases.
3. The study can be to assess the effectiveness of progressive muscle relaxation therapy within different settings of community area.
4. A comparative study can be done to assess the effect of progressive muscle relaxation therapy and various other exercises for reducing anxiety.
5. A study can be conducted to assess the effect of progressive muscle relaxation therapy with large sample size within different cities.

## 5. Conclusion

Progressive muscle relaxation therapy is helpful for elderly to reduce the level of anxiety. This progressive muscle relaxation therapy on elderly do not cost patient extra time and will be effective in reducing the level of anxiety. Also due to this exercise it reduces the muscle spasms within the legs. The health benefits of stretching are wonderful as it increases, stamina, relaxes body and mind, improves the concentration, and it reduces the risk of anxiety. Other benefits of progressive muscle relaxation therapy are reduction of stress and tension, muscle pain, the development of a feeling of well-being, lowered blood pressure, decreased muscle tension, thereby reducing the body's need for oxygen and reducing fatigue and anxiety. Therefore, the determination of the level anxiety is needed for further intervention. The problem faced during study was the elderly group took time to adapt the therapy, as well as they are not able to remember the sequence of the progressive muscle relaxation therapy as i thought. Starting two to three days some of the females from elderly group, they feel uneasy because of some exercises was in sleeping positioning but looking at other elderly they try to do. But the findings showed that administration of progressive muscle relaxation therapy are useful in reducing the anxiety and promotes the comfort. Hence, that the progressive muscle relaxation therapy (exercise) is effective in reducing the level of anxiety.

**Conflict of Interest:** The author declares that they have no conflict of interest.

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**Ethical Clearance:** A research proposal approved by Institutional Ethical Committee (IEC), meeting was held in Bharati Vidyapeeth (Deemed to be University) College of Nursing Sangli. The permission for pilot and main study was obtained from selected corporators of Sangli, Miraj and Kupwad corporation area to conduct the study after IEC.

## 6. References

- 1 Elias SM. Prevalence of loneliness, anxiety, and depression among older people living in long-term care: a review. *International Journal of Care Scholars*. 2018 Feb 2;1(1):39-43.
- 2 Krell-Roesch J, Lowe VJ, Neureiter J, Pink A, Roberts RO, Mielke MM, Vemuri P, Stokin GB, Christianson TJ, Jack CR, Knopman DS. Depressive and anxiety symptoms and cortical amyloid deposition among cognitively normal elderly persons: the Mayo



- Clinic Study of Aging. *International psychogeriatrics*. 2018 Feb;30(2):245-51.
- 3 de Oliveira LD, Souza EC, Rodrigues RA, Fett CA, Piva AB. The effects of physical activity on anxiety, depression, and quality of life in elderly people living in the community. *Trends in psychiatry and psychotherapy*. 2019 Feb 4;41:36-42.
- 4 Priego-Parra BA, Triana-Romero A, Pinto-Gálvez SM, Ramos CD, Salas-Nolasco O, Reyes MM, Ramos-de-la-Medina A, Remes-Troche JM. Anxiety, depression, attitudes, and internet addiction during the initial phase of the 2019 coronavirus disease (COVID-19) epidemic: A cross-sectional study in México. *MedRxiv*. 2020 May 15:2020-05.
- 5 Sharma P, Asthana HS, Gambhir IS, Ranjan JK. Death Anxiety among Elderly People: Role of Gender, Spirituality and Mental Health. *Indian Journal of Gerontology*. 2019 Jun 1;33(3).
- 6 Thomas R, Chur-Hansen A, Turner M. A systematic review of studies on the use of mindfulness-based cognitive therapy for the treatment of anxiety and depression in older people. *Mindfulness*. 2020 Jul;11:1599-609.
- 7 Salvi SN, Londhe N. A Study to Assess the Effectiveness of Planned Teaching Program on Knowledge Regarding Post-Operative Home Care Following Coronary Artery Bypass Grafting Among Patient Undergoing Surgery in Selected Hospitals. *Turkish Online Journal of Qualitative Inquiry*. 2021 Sep 1;12(8).
- 8 Gedugol BJ, Yayathee S, R S. Quality of life and mental health of patients with cardiovascular (CVD)disease. *Journal of Critical Reviews*. 2020 August; 07(15): 4426-4436.
- 9 Uchmanowicz I, Lomper K, Gros M, Kałużna-Oleksy M, Jankowska EA, Rosińczuk J, Cyrkot T, Szczepanowski R. Assessment of frailty and occurrence of anxiety and depression in elderly patients with atrial fibrillation. *Clinical Interventions in Aging*. 2020 Jul 15:1151-61.
- 10 Zhao L, Zheng X, Ji K, Wang Z, Sang L, Chen X, Tang L, Zhu Y, Bai Z, Chen R. The relationship between social support and anxiety among rural older people in elderly caring social organizations: A cross-sectional study. *International Journal of Environmental Research and Public Health*. 2022 Sep 10;19(18):11411
- 11 Salvi SN, Londhe N. A Study to Assess the Effectiveness of Planned Teaching Program on Knowledge Regarding Post-Operative Home Care Following Coronary Artery Bypass Grafting Among Patient Undergoing Surgery in Selected Hospitals. *Turkish Online Journal of Qualitative*
- 12 Satralkar SP, Sakate S. effectiveness of plan teaching on homecare of oral cancer among care givers of patients patients international journal of cardio vascular disease research (JCDR). (2020); 12(3): 2180-2191.
- 13 Pradhan J, Pradhan R, Samantaray K, Pahantasingh S. Progressive muscle relaxation therapy on anxiety among hospitalized cancer patients. *European Journal of Molecular & Clinical Medicine*. 2020;7(8):1485-8.
- 14 Kusumawaty J. The Effect of Progressive Muscle Relaxation Using Audio-Visual Media on Blood Pressure Reduction in Elderly Hypertension Patients. *International Journal of Nursing and Health Services (IJNHS)*. 2021 Oct 20;4(5):569-74.